

**7<sup>th</sup> Avenue & Bethany Home Road, 16<sup>th</sup> Street and Camelback, and Central & Camelback  
Water Quality Assurance Revolving Fund (WQARF) Sites'  
Community Advisory Board (CAB) Public Meeting**

**Wednesday, March 11, 2015**

**5:30 p.m. - 7:30 p.m.**

**A.L. Moore-Grimshaw Mortuaries Bethany Chapel  
710 West Bethany Home Road.  
Phoenix, AZ 85013**

**FINAL MINUTES**

**CAB Members Present:** Stan Watts; Chad Johnson; Paul Barquinero; Peter Zorbas; Lynn Morrow; Paul "Tom" Cox; Maureen Rooney

**CAB Members Absent:** Daniel Kingston; Pam Perry; Alicia Hawley

**ADEQ Staff Present:** Kevin Snyder, Project Manager; Scott Goodwin, Project Manager; Scott Green, Remedial Projects Unit Manager; Caroline Oppleman, Community Involvement Coordinator

**Members of Public Present:** Joe Guidice, City of Phoenix; Anthony Ricci; Steve Sutherland; Dan Barusch, Matrix Design Group (consultant to ADEQ)

**1. Call to Order/Introductions**

Mr. Chad Johnson called the meeting to order at 5:34 p.m.; introductions were made by those present.

**2. Acceptance and/or Changes to July 23, 2014 Minutes**

The CAB agreed there were no changes requested to the minutes. Mr. Lynn Morrow moved to accept the July 23, 2014 meeting minutes as written, which was seconded by Mr. Watts; motion passed.

**3. CAB Member Application Review/Vote**

After a short discussion, Mr. Morrow moved to CAB accept Mr. Ricci application, which was seconded by Mr. Barquinero; motion passed.

**4. Change CAB Name to Central Phoenix CAB**

The CAB discussed change the name due to new sites added to registry that are near by. Mr. Watts moved that the name be changed to Central Phoenix CAB. It was seconded by Mr. Morrow; motion passed effective immediately.

## **5. Annual CAB Co-Chair Nominations (Vote)**

The CAB discussed co-chair nominations. Mr. Barquinero mentioned he would consider the co-chair role in the future, and stated he supported keeping Mr. Johnson and Mr. Watts in their positions. Mr. Morrow moved that Mr. Johnson and Mr. Watts stay on as CAB co-chairs, seconded by Mr. Barquinero; motion passed.

Mr. Johnson added that if anyone ever is interested, they would be more than willing to step down and give someone else a turn.

## **6. Revise CAB Charter (Discussion/Vote)**

Ms. Oppleman reviewed the changes in the charter. Mr. Watts questioned section IVd regarding meeting four times per year. Ms. Oppleman stated that is required by statute however, if there is no reason to hold a meeting, the CAB can decide to meet once site activities dictate. Ms. Oppleman stated this is common with other CAB's,

Mr. Tom Cox mentioned that he feels the CAB needs to make the public more aware of the cleanup and the benefits of the cleanup. Mr. Johnson asked if what he meant was, is there a better way for us to get this information out to the public in a more prescriptive way, including awareness and the benefits associated with the cleanup, etc. The CAB further discussed their role as advisors to ADEQ, notifying the community neighborhoods and neighbors, and the general public about the site, provide input to and from the public and be an avenue for information sharing. Mr. Watts added they are not legislature or policy makers, they can only hear from and give back to the people doing the cleanup and notify the community. Mr. Johnson agreed and added the job is to follow through on making sure the cleanup is happening properly and that the public has a chance to learn about it. Ms. Oppleman stated that great strides have been made in the CAB's process and meeting outcomes, and stated they have been very helpful and thanked the Board.

Mr. Barquinero stated from earlier discussion the CAB should follow through more with items I and III (d) from the charter in regards to notifying and educating the public. This should be a discussion topic at future meetings. Mr. Barquinero motioned to accept the charter as is, Mr. Cox seconded the motion; motion passed.

## **7. 16th Street and Camelback WQARF Site**

- **16th St. Overview – Background/Status** - Mr. Snyder gave a presentation regarding the WQARF process and identifying that 16<sup>th</sup> Street is in the remedial investigation (RI) phase. He stated that public comments on the draft RI report are going to be accepted for another couple of weeks, until March 23<sup>rd</sup>. The next step would be moving into the feasibility study which looks at options at finalizing cleanup.
- Mr. Snyder showed a site map. Mr. Watts questioned the diagram location. Mr. Snyder mentioned that there were actually two detached plumes, one in the southwest corner, the other up to the north. Mr. Snyder reviewed figures that showed the locations of the two plumes and stated there was no co-mingling of the two plumes.  
Mr. Cox asked about a gas station that used to be on that corner at 16<sup>th</sup> and Highland Avenue. Mr. Snyder mentioned that sampling was done all around that area. There was further discussion about that corner. Mr. Snyder stated that they (ADEQ)

had not seen anything in that direct area, so at that time there was no problem with that site. ADEQ continues to monitor the area.

- Mr. Snyder welcomed the CAB and public to make comments in writing or by email, as individuals or as groups. The deadline is 5 p.m. on Monday, March 23<sup>rd</sup>, 2015. Ms. Oppleman mentioned that the draft RI report was made available (as well as on the ADEQ website).
  
- **Public Comments on Draft Remedial Investigation (RI)**
  
- Mr. Morrow asked if there was two areas concerned with this site, and if the northern part of the site was clean. Mr. Snyder stated the northern plume was very close to clean, which has gone down from 160 µg/l to 11 µg/l PCE in the past 16 years, DCA/DCP levels were both down to under 1 µg/l. Mr. Snyder stated that the southern portion was very clean and that testing resulted in almost no DCA/DCP. Mr. Morrow asked if nothing was done what would happen. Mr. Snyder mentioned if the remediation was not put into place, the site would probably have attenuated over time. He stated that there were no receptors, and with lower concentration sites we see more attenuation.
  
- Mr. Watts stated that they have done almost nothing to this site in almost 20 years, and in that period of time would we expect contaminants to migrate off the site. Mr. Snyder stated yes, but that the release on the site was old and minor, which itself had attenuated. With no continual source, the contaminant in the groundwater had attenuated. Mr. Watts and Mr. Snyder further discussed attenuation.
  
- Mr. Watts referenced one of the drawings, areas were identified on the site from which water would be used but isn't used now or hasn't been for a while. Mr. Snyder mentioned he wasn't aware of that and that he didn't recall that there were any production wells on the site, although there are monitoring wells. Mr. Watts stated they weren't called production wells, and asked for clarification in the document, talking more about what that water source is, stating the difference is between production wells and other water sources or wells.
  
- Mr. Watts also commented on the maps, stating that they were strong showing background and analysis, but they were not consistent with showing updated aerials and/or graphics to show consistency. He stated one of the maps was a current map on a historic aerial photo and that they should all be the same aerial for consistency.
  
- Mr. Morrow stated as a community in 50 or 100 years, they are going to be more dependent on groundwater. His opinion is that they have to do the right thing in regards to using groundwater and wells to help preserve future water supply and in terms of drought. He asked how far we need to go to make sure this water is usable down the road and do the right thing. Mr. Snyder stated that the RO (and the Feasibility Study) report is meant to identify what is there, how it got there, and what the risk is to users of the site. He stated the land use is also portrayed in the report, showing possible uses of the land up to 100 years into the future, stating that the RO's are usually predicted for that time frame. The FS will address such an issue. Mr.

Snyder stated questionnaires were sent to the City of Phoenix and SRP who are the main providers in the area.

- Mr. Ricci asked about one of the consultants on the project, stating for the record that his father worked for one of the contractors working the sites (Caldwell), and that there may be a conflict of interest even though his father deals with private sector.

➤ **Solicitation of Remedial Objectives (ROs) (Discussion)**

Mr. Snyder explained the ROs and reviewed some examples for groundwater, solicited verbal and written ROs, and reviewed the WQARF process. He asked for comments regarding the ROs.

- Ms. Rooney asked if dust can be a receptor, but not in this case since the soil wasn't contaminated, to which Mr. Snyder stated that was correct.
- Mr. Cox asked about stormwater drainage, and if contaminants could be flushed with water and travel. Mr. Snyder stated contaminants could be flushed, but currently there are no surface water issues, and the standards, which were pretty conservative, would address that concern.
- Mr. Ricci asked if there was any concern with private use of this groundwater or if it was just public utilities. Mr. Snyder stated that there was currently no private use and there was minimal concern for such use. Most users needed to get permission/permits through ADWR or have water rights from the City of Phoenix or SRP (to use the wells). ADEQ would be notified about private use requests and then would work with them – stating that the City of Phoenix was in an aquifer that is controlled in regards to who can use the water.
- Mr. Watts asked if alternatives for different sites could have language about soil, groundwater, dust, surface water, etc. but none of those were issues here. Mr. Snyder said that was correct, that there was no water being pumped or distributed to other properties, although there is some surface water from SRP.
- Ms. Rooney questioned an SRP well delivering irrigation water south of there. Mr. Snyder stated that there was a pipeline delivering water to that area, the well is located outside of the plume and there were some irrigation rights outside of the plume, but they were not considered to be issues. Mr. Watts mentioned that SRP stated they planned to offer their wells to Phoenix for drinking water. Mr. Snyder replied that the pumping was more from wells all around the valley, and that they could increase the pumping through new wells. If they were to come to an area such as this site, then they would have to address that.
- Mr. Watts asked if anyone would like to comment on potential ROs. Mr. Snyder stated again that they have until March 23<sup>rd</sup> to do so.

- Mr. Watts asked if it would be helpful for them to adopt the RO's and if they should motion to accept. Mr. Morrow moved that they pass the motion, and Mr. Tom Cox seconded, and the motion was passed unanimously by the board
- Mr. Guidice stated that he was glad people were in attendance, and gave some information about the City of Phoenix water supply. He stated that only 3% of water used in the City was from groundwater, with the majority of water used being surface water. He commended them for being well educated about water issues. He stated Phoenix is working hard to preserve assured water for current residents, future growth, and economic development. Mr. Watts asked Mr. Guidice if he had comments on the RI, to which Mr. Guidice stated he will talk to his staff and figure out if they want to submit any comments.

## **8. Central & Camelback WQARF Site**

### **➤ Status of Remediation and Future Feasibility Study Activities**

- Mr. Snyder gave a presentation on the Central and Camelback site. He did point out that two extraction wells samples showed a nice decline in contaminant numbers/levels.
- Mr. Morrow asked if there were any extraction wells in the large area on the east side of Central, to which Mr. Snyder stated not at this time, but that they are looking at that now. Currently the FS report is being prepared and hoped to have the FS report out to the public in May to view.
- Mr. Morrow asked about groundwater level. Mr. Snyder replied it was right about 60-65 feet below surface right now and has been that way for several years; 16<sup>th</sup> and Camelback was at about 70-75 feet below surface.
- Mr. Watts stated that the bank building was being converted into a residential building and asked if that would affect the cleanup levels or activities for the area. Mr. Snyder stated that the wells identified in the RO report and recommendations would reflect clean up to drinking water quality, which would accommodate any uses. The soil wasn't affected by the release in the SW corner, the gas station release requires some work and the water is being treated.

## **9. 7th Avenue & Bethany Home WQARF Site**

Mr. Scott Goodwin presented information on the pilot test and to catch up the new attendees.

### **➤ Source Area Sampling Data/Pilot Test Update**

- Mr. Scott Goodwin reviewed the two plumes and stated there was a pilot treatment study conducted. He stated the eastern site plume had about 1,000 ppm and western site plume only 100 ppm of PCE. He discussed receptors in the area, including an SRP well and a currently inactive City of Phoenix well.

- Mr. Goodwin stated the year worth of data from the pilot test looks great with continuing reductive chlorination in the area. He stated the PRAP report should be complete soon.
- AECOM, new contractor, has slightly changed the remedial plan written by Arcadis with a few noted changes in the presentation
- Mr. Goodwin mentioned that a second injection line is still proposed on Berridge Lane near the highest concentration location on the west side plume. Mr. Watts asked how many wells were planned or how many points will be injected. Mr. Goodwin replied he believed 11 in each transect.
- Mr. Morrow asked if the water flow time/distance related to the number of wells, to which Mr. Goodwin stated it was related to the actual time for the water to move. Mr. Goodwin stated they are not seeing the dechlorination impacts very far downgradient of the injection wells due to slow water flow. The changed treatment time from 5 to 9 years is because Arcadis' approach was to pump down gradient to make the flow faster. Instead, AECOM is not proposing pumping and expects to treat the area for 9 years. Mr. Watts asked if that was not a continual process and if it was just periodic injections, to which Mr. Goodwin said correct.

#### **10. Community Involvement Plan Review**

Mr. Watts stated the CAB could talk about the plan, he had a few mistakes to note in the Community Involvement Plan (CIP) and suggested that voting be moved to the next meeting.

Ms. Oppleman gave an overall summary of what is included in the CIP. Shew pointed out specifically areas where ADEQ seeks specific input into the process as they learn about cleanup of the sites. The plan will indicate what has been accomplished so far, where they are in the process and what the goal is with the public/CAB weighing in. Mr. Barquinero stated that he thought this CIP would address what Mr. Cox was talking about earlier with community involvement.

Mr. Morrow questioned the community involvement area maps. Ms. Oppleman stated that was the area for which people who may want to be involved are located within, to which Mr. Morrow stated it should be a "personal impact area". Ms. Oppleman stated the terminology is actually the community involvement area, and just gives an idea for what they feel an appropriate area around the sites for which involvement should take place, there are no strict rules saying people outside that area could not or would not be involved.

#### **11. New CAB Member Training/CAB Packets**

Ms. Oppleman described the CAB binders and what they include, and distributed them to the new CAB members present.

#### **12. Call to the public**

No comments.

### **13. Future Meeting/Agenda**

Mr. Snyder stated that the FS would be available for comment by mid-June, for both of the Camelback sites.

Next meeting tentatively is scheduled for June 17, 2015 at 5:30 p.m. at the A.L. Moore-Grimshaw Mortuaries Bethany Chapel. Agenda topics will include:

- Sites Community Involvement Plan
- Both Camelback sites FS reports
- PRAP for the Bethany Home site

### **14. Adjournment**

The meeting adjourned at 7:38 pm.

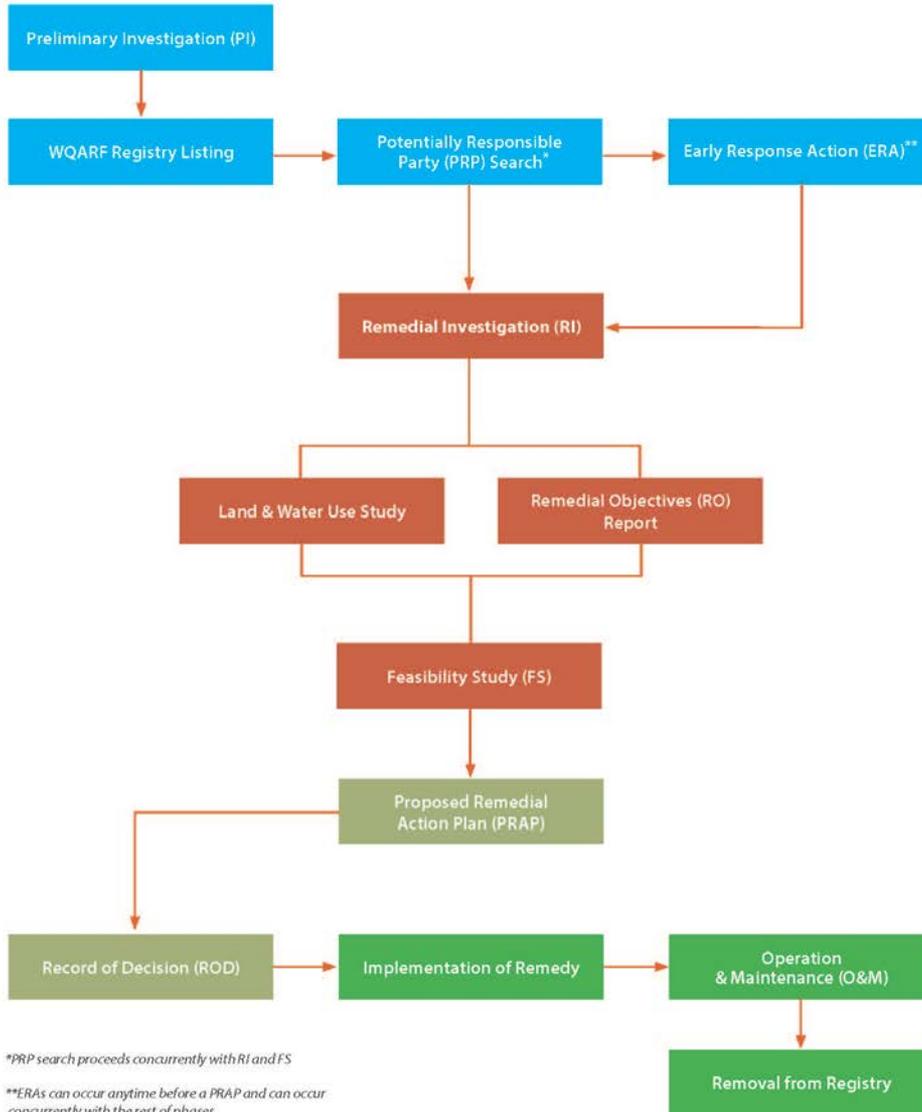
*This meeting was recorded on a digital device as a record of the proceedings. To listen to recording, or for additional information about the content of this meeting, contact:  
ADEQ: Caroline Oppleman at 602-771-6890.*



# 7th Avenue & Bethany Home Road Water Quality Assurance Revolving Fund Site

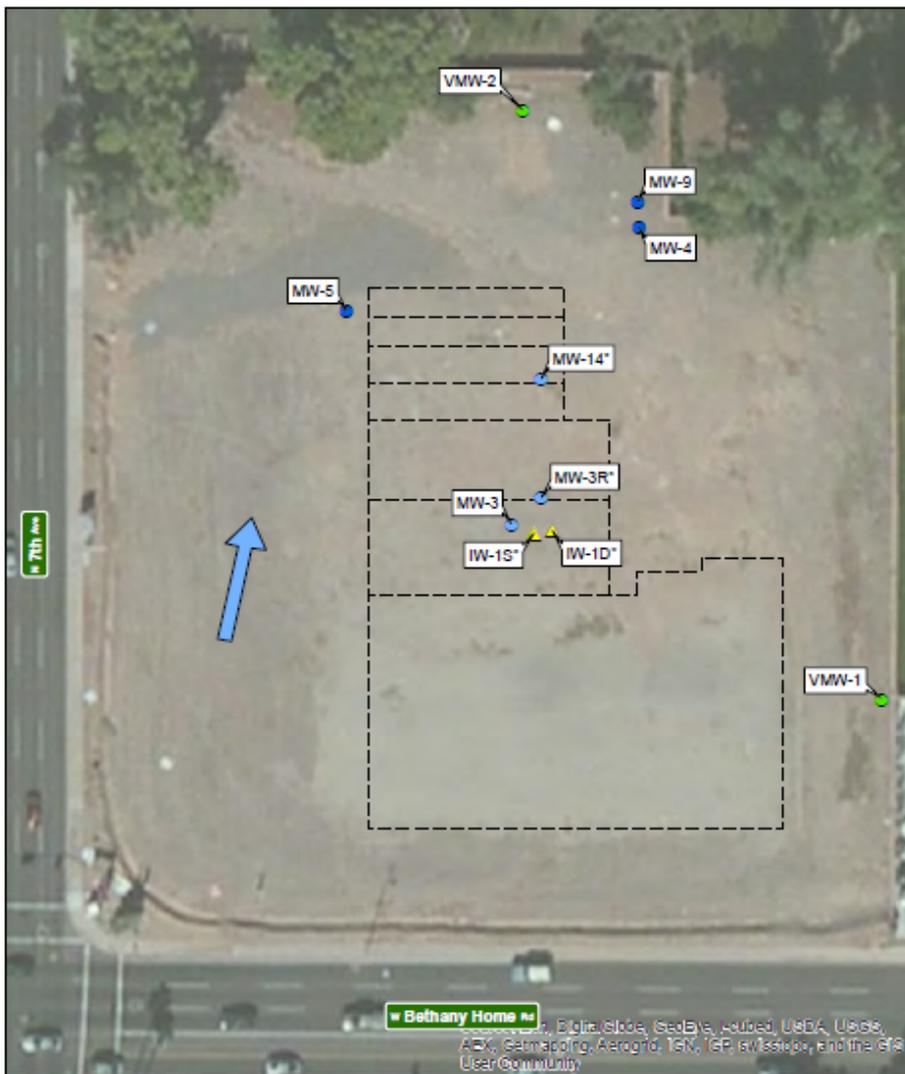
## Community Advisory Board Meeting March 11, 2015

## WQARF PHASES



- Arcadis sampled pilot area test wells again in August 2014. Results indicated continued reductive dechlorination in the pilot test area. Particularly at directly down gradient monitor well 3R.

G:\Project\ADEQ (Arizona Department of Environmental Quality)\7th Bethany\GIS\p\ops\fig 3 Bayless property well network.mxd 1/10/2014

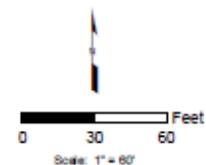


### LEGEND

- Groundwater monitor well
- Groundwater monitor well (pilot test network)
- Vapor Monitoring Well (Approximate Location)
- ▲ Groundwater injection well
- Former building
- ➔ Approximate direction of groundwater flow

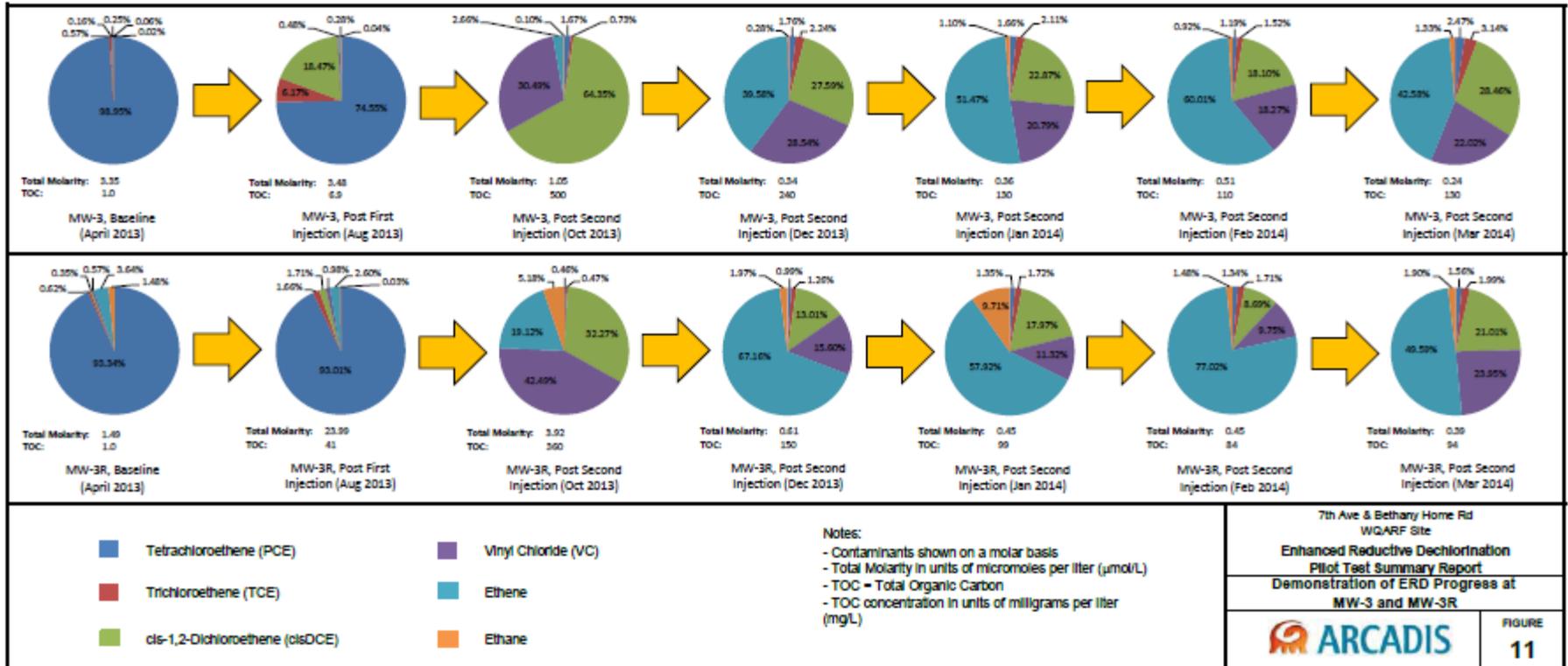
### NOTES

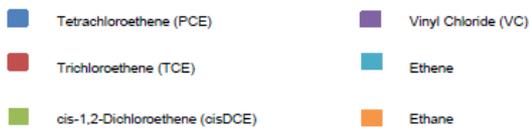
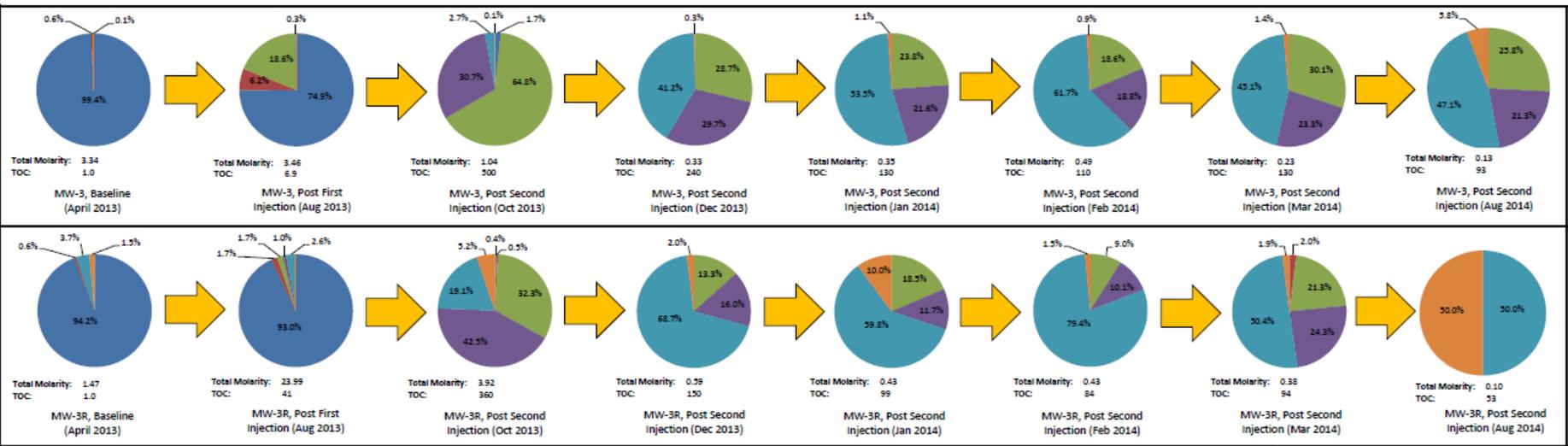
- Aerial photo source: ESRI World Imagery.
- \* = well location is approximated based on measurements collected at the site.



7TH AVENUE & BETHANY HOME ROAD WQARF SITE  
PHOENIX, ARIZONA

**BAYLESS PROPERTY WELL NETWORK**





Notes:  
 - Contaminants shown on a molar basis  
 - Total Molarity in units of micromoles per liter (µmol/L)  
 - TOC = Total Organic Carbon  
 - TOC concentration in units of milligrams per liter (mg/L)

7th Ave & Bethany Home Rd  
 WQARF Site  
**Enhanced Reductive Dechlorination  
 Pilot Study Performance Monitoring Update**  
 Demonstration of ERD Progress at  
 MW-3 and MW-3R

FIGURE 2

- In the August 2014 sampling, still no significant impact at monitor well MW-14 located approximately 65 feet down gradient of the injections wells. Tracer, fluorescein dye, and total organic carbon arrival at MW-14 are indicating aquifer travel times on the order of 0.3 feet per day.

- ADEQ switched to a best value based contract in fiscal year 2015. Aracadis did not make the engineering discipline of the new contract. The contract was awarded to URS Corporation, now AECOM.
- AECOM is currently finalizing the proposed remedial action plan (PRAP). Reductive de-chlorination is the proposed remedy.

- AECOM has slightly revised Arcadis' remedial plan, predominately by:
  - moving the on site injection line closer to MW-4, near the north side of the property.
  - Not including a pumping element.
  - Adding two more injection wells to each transect.
  - Applying very conservative aquifer travel time estimate of 0.15 feet/day, which increases the estimated time needed for treatment from five to nine years.

- A second injection line is still proposed for Berridge Lane and a single injection point is still planned near the highest concentration location on the west side plume.
- ADEQ hopes to complete the Record of Decision by the end of Fiscal Year 2015.

# Questions?

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## ADEQ Contacts:

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(602) 771-4452, 1-800-234-5677 ext. 771-4452

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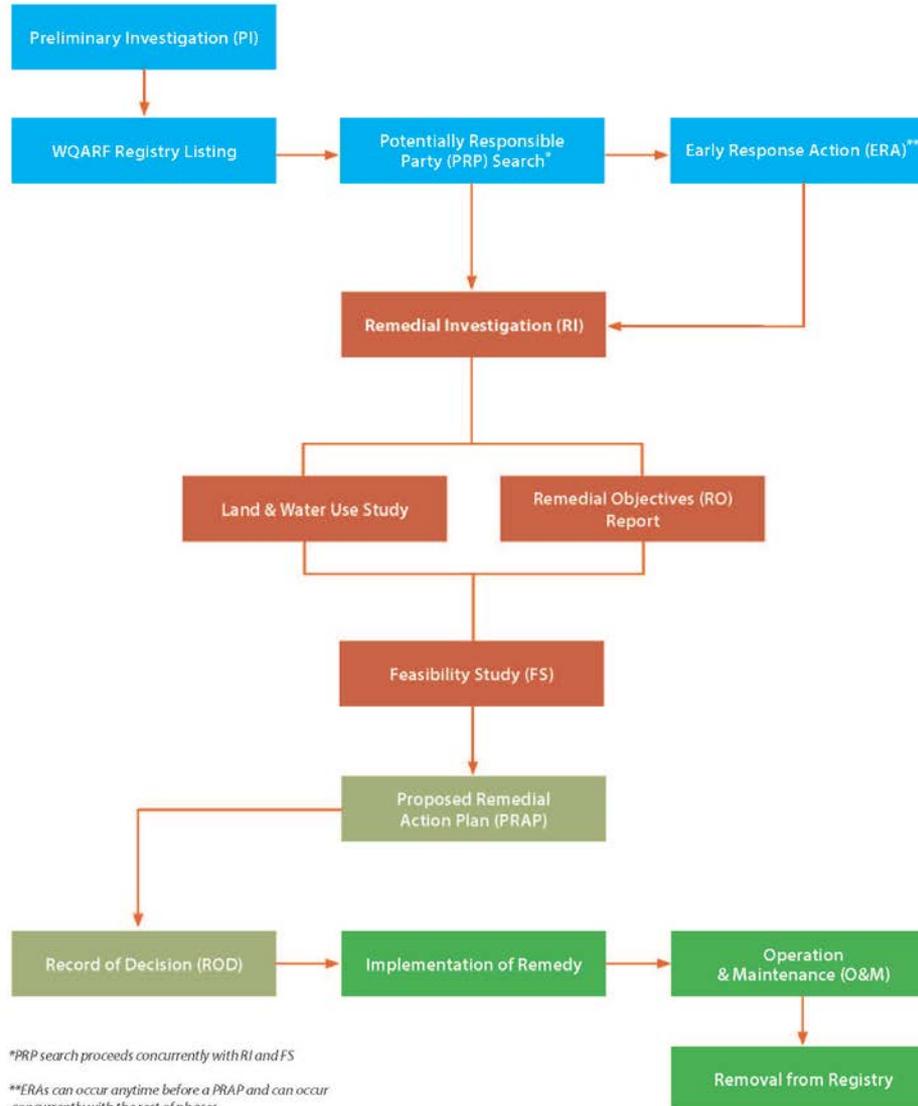
# 16<sup>th</sup> Street and Camelback WQARF Site

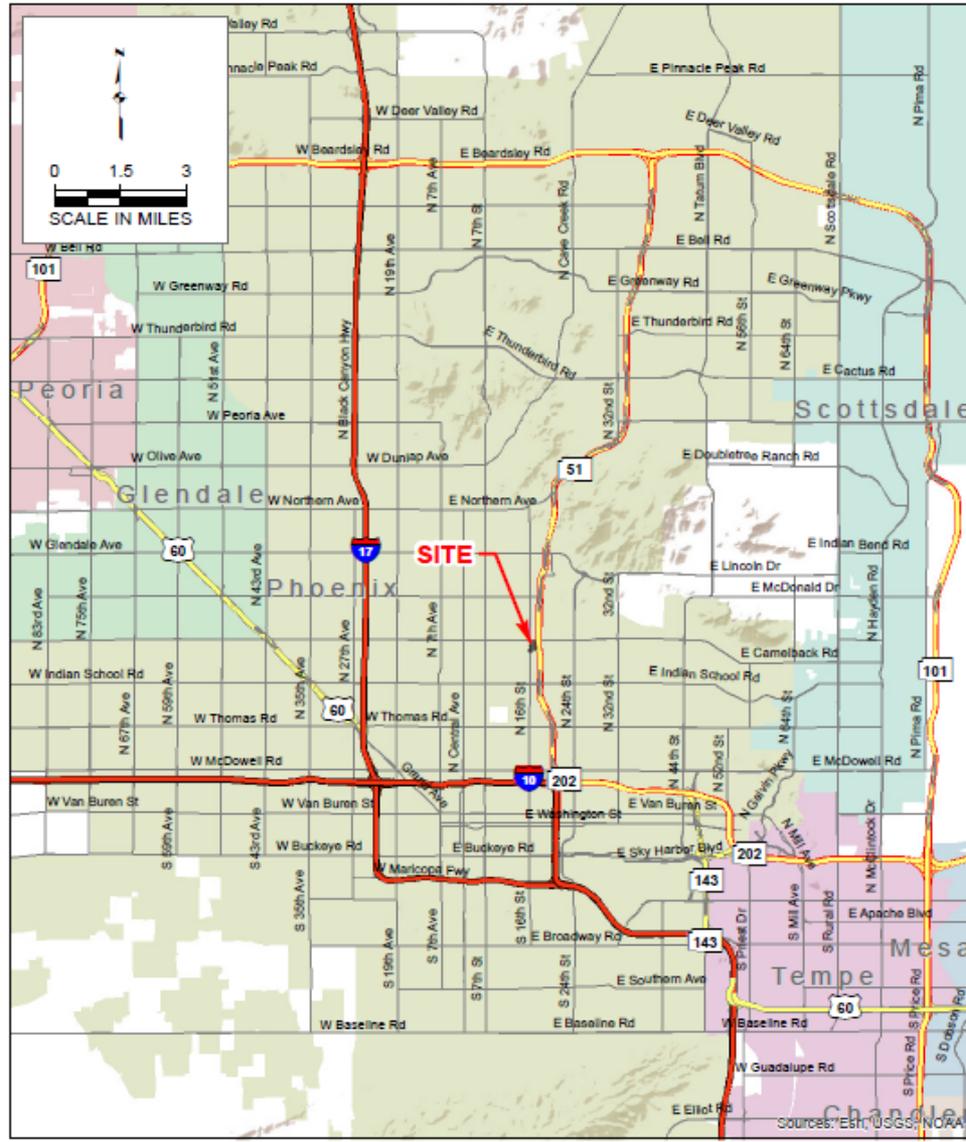
Kevin Snyder, Project Manager

Caroline Oppleman, Community Involvement Coordinator

March 11, 2015 5:30pm

## WQARF PHASES





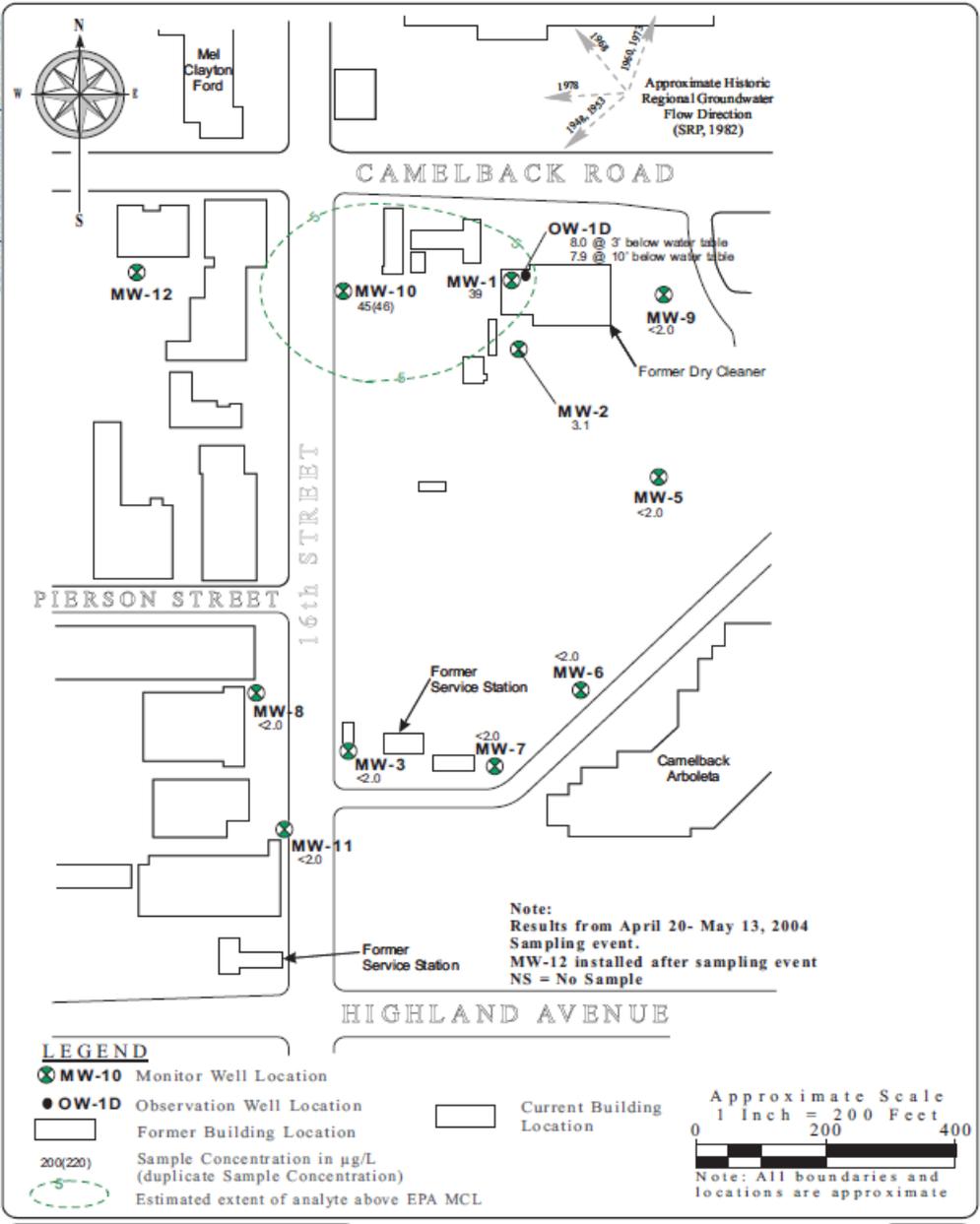
**Figure 1**  
**SITE LOCATION MAP**  
 REMEDIAL INVESTIGATION  
 SUMMARY REPORT  
 16TH STREET AND CAMELBACK WQARF SITE  
 PHOENIX, ARIZONA



## Site History

- The southeast corner property was acquired by Bank One in 1989 through foreclosure.
- Bank One initiated site investigation. They collected soil samples, soil gas samples, installed wells, and collected groundwater samples through 1993. They also excavated contaminated soil from three areas of soil contamination by petroleum hydrocarbons in 1993.
- Contaminants at the site were tetrachloroethene (PCE) in the northern portion of the site and 1,2-dichloroethane (DCA) and 1,2-dichloropropane (DCP) in the southern portion of the site.

L:\Quality\Projects\51252\isoconcentration.mxd MW-12.dwg

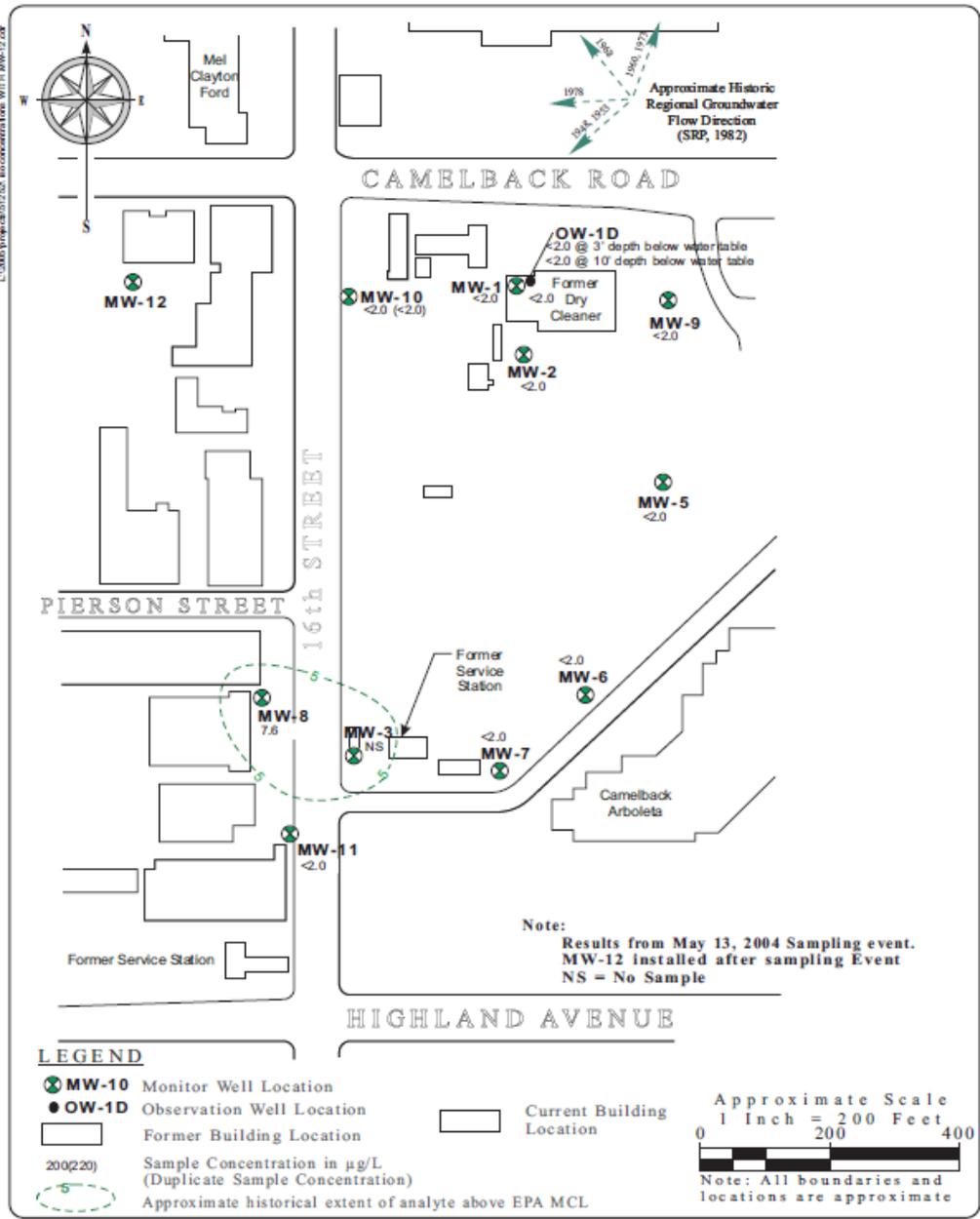


**KLEINFELDER**  
 Project Number 51252 January 2005

Arizona Department of Environmental Quality  
 16th Street and Camelback Road WQARF Site  
 Phoenix, Arizona

**ISOCONCENTRATION  
 CONTOUR MAP FOR PCE**

PLATE  
**5**



## Site History (continued)

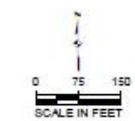
- Bank One settled with ADEQ in 1994 and ADEQ took over investigation of the site.
- ADEQ collected soil samples, soil gas samples, installed wells, collected groundwater samples, and conducted a pilot study for soil and groundwater remediation.
- The pilot study indicated that soil vapor extraction (SVE) and air sparging were not cost effective.
- ADEQ continues to monitor and sample groundwater.

- PCE is currently the only contaminant of concern detected in groundwater at the site at concentrations greater than the Aquifer Water Quality Standard (AWQS).
- Contaminants appear to have naturally attenuated.

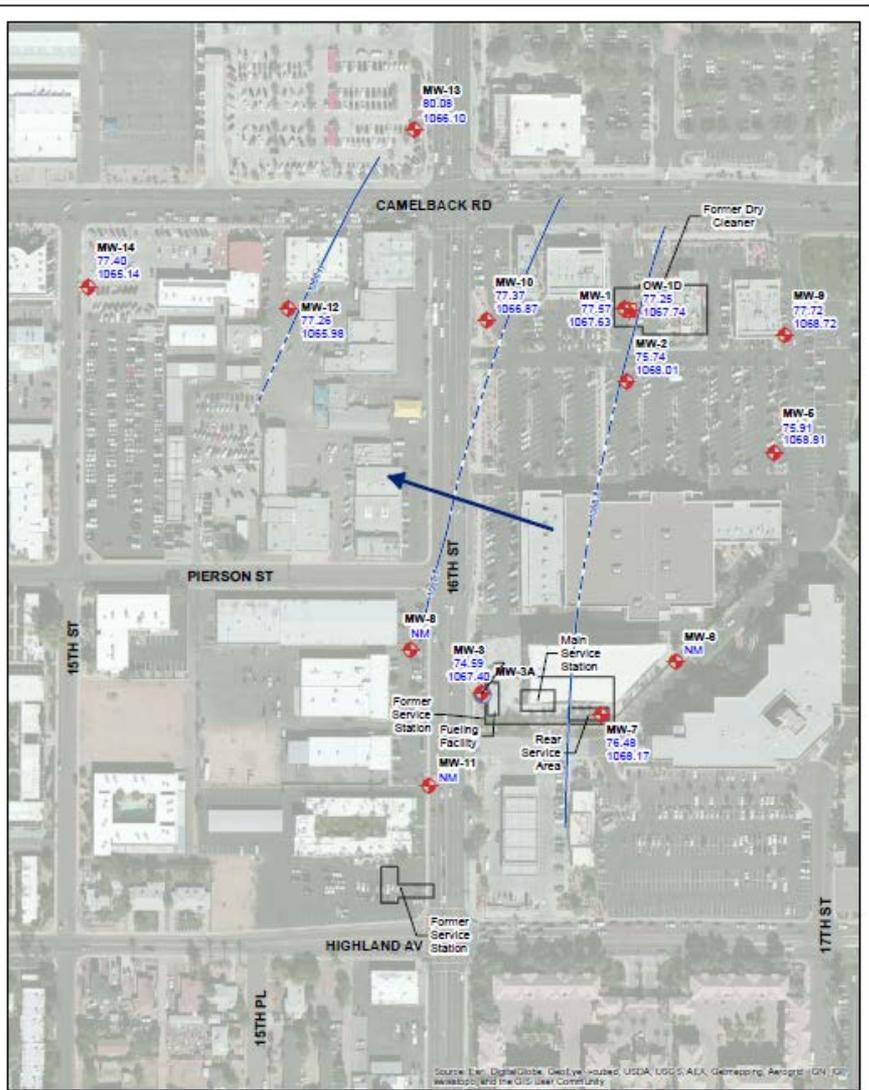
<b>Contaminant</b>	<b>December 28, 1999</b>	<b>August 30, 2007</b>	<b>April 17, 2014</b>
PCE	160 ug/l	20 ug/l	11.4 ug/l
1,2-DCA	400 ug/l	<2.0 ug/l	0.62 ug/l
1,2-DCP	15 ug/l	<2.0 ug/l	<0.5 ug/l



Source: U.S. Digital Globe, Inc. (satellite imagery); U.S. Geological Survey (topographic data); IGN, IGN (street data); and the City of Phoenix (city data).



**Figure 10**  
**APRIL 2014 PCE**  
**CONCENTRATIONS**  
**IN GROUNDWATER**  
**REMEDIAL INVESTIGATION**  
**SUMMARY REPORT**  
**16TH STREET AND CAMELBACK WQARF SITE**  
**PHOENIX, ARIZONA**



Source: Esri, DigitalGlobe, GeoEye, iSatellite, USDA, USGS, AeroGRID, IGN, GEBCO, and the GIS User Community

**EXPLANATION**

- MONITOR WELL
- OBSERVATION WELL
- REPLACEMENT MONITOR WELL
- GROUNDWATER ELEVATION CONTOUR (Dashed where inferred)
- DIRECTION OF GROUNDWATER FLOW
- DTW = DEPTH TO WATER
- AMSL = ABOVE MEAN SEA LEVEL
- MP = MEASURING POINT
- NM = NOT MEASURED

Note: Measuring Point = North side top of casing, DTW measured April 3, 2014.



**Figure 9**  
**APRIL 2014**  
**GROUNDWATER ELEVATION MAP**  
 REMEDIAL INVESTIGATION SUMMARY REPORT  
 16TH STREET AND CAMELBACK WQRF SITE  
 PHOENIX, ARIZONA

## RI Report

- Summarizes investigations conducted to date at site.
- Contains Land and Water Use Report detailing current and reasonably foreseeable land and water uses.
- Will also include finale Remedial Objectives (ROs) Report.



# Remedial Investigation Comments

Comments can be given orally or in writing. If giving oral RI Comments, please state the following:

Name

Organization/Company

Address

Phone and/or e-mail

Summarize your Comment

Please remember, all comments must be received by 5:00 pm on March 23, 2015.

# Remedial Objectives

Remedial Objectives (ROs) under R18-16-406(I)(4) are established for the current and reasonably foreseeable uses of land and beneficial uses of waters of the state.

ROs are the clean-up goals determined for a specific site.

ROs will be framed as uses of a resource to be protected, when the use needs to be available and how long a specific use might be needed by the affected public.

ROs must be determined with input and discussion with land owners, local governments, water providers, and the public including the CAB members for the site.

# Remedial Objectives

Example ROs from another WQARF site.

**The remedial objective for regional groundwater at the site is to protect for the use of the groundwater supply by the City of Phoenix, and SRP. This action is currently needed and will be needed if/when groundwater use changes to municipal/drinking water uses. This action will be needed for as long as the level of contamination in the groundwater threatens the use of the regional groundwater for municipal/drinking water uses.**

# Remedial Objectives

If you want to provide an RO verbally or in writing, please state/include the following:

- Name
- Organization/Company
- Address
- Phone and/or e-mail
- Summarize your RO
- Please remember, all ROs must be received by 5:00 pm on March 23, 2015.

**Questions?**



# Contacts

## Contact Information

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Remedial Projects Section

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Remedial Projects Section

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(602) 771-6890, 1-800-234-5677 ext 771-6890

## Future Planned Work

- Continue to monitor and sample groundwater.
- Finalize Remedial Investigation (RI) Report.
- Conduct Feasibility Study (FS).
- Prepare Proposed Remedial Action Plan (PRAP) and Record of Decision (ROD)

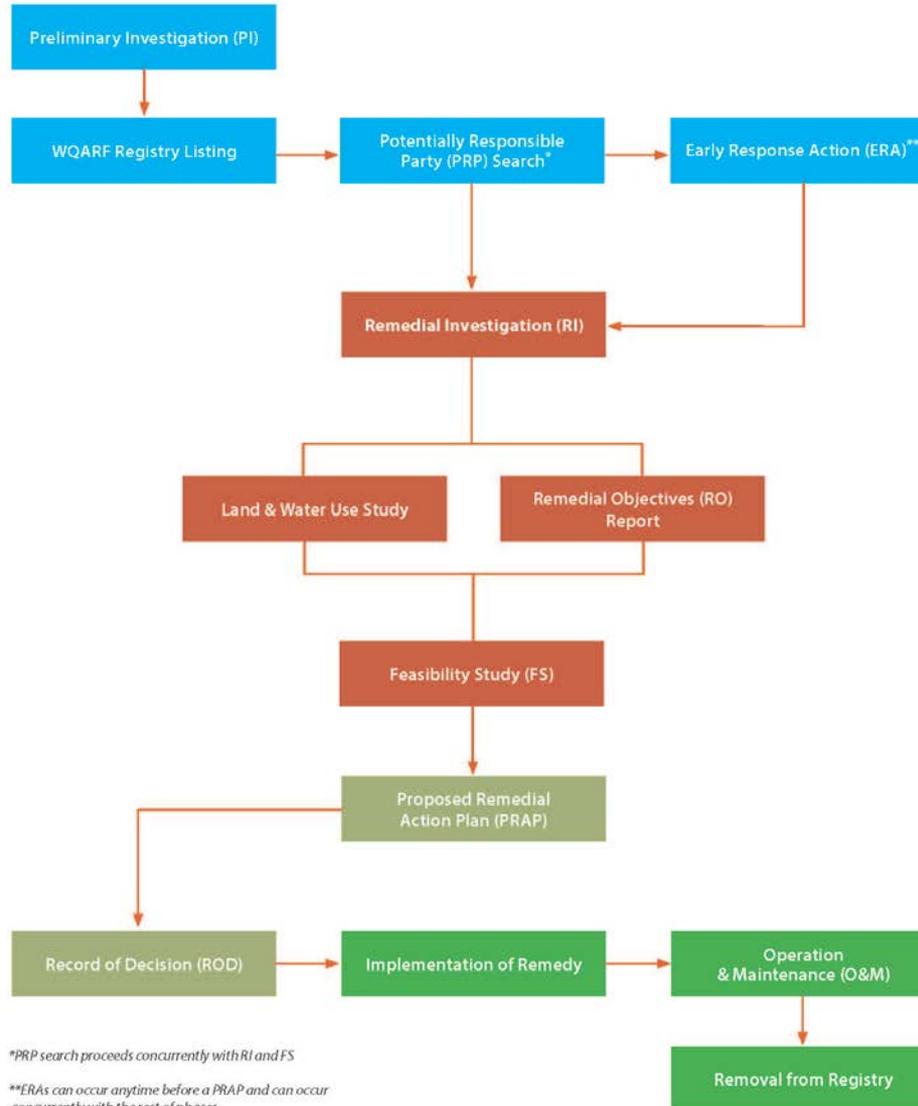
# Central and Camelback WQARF Site

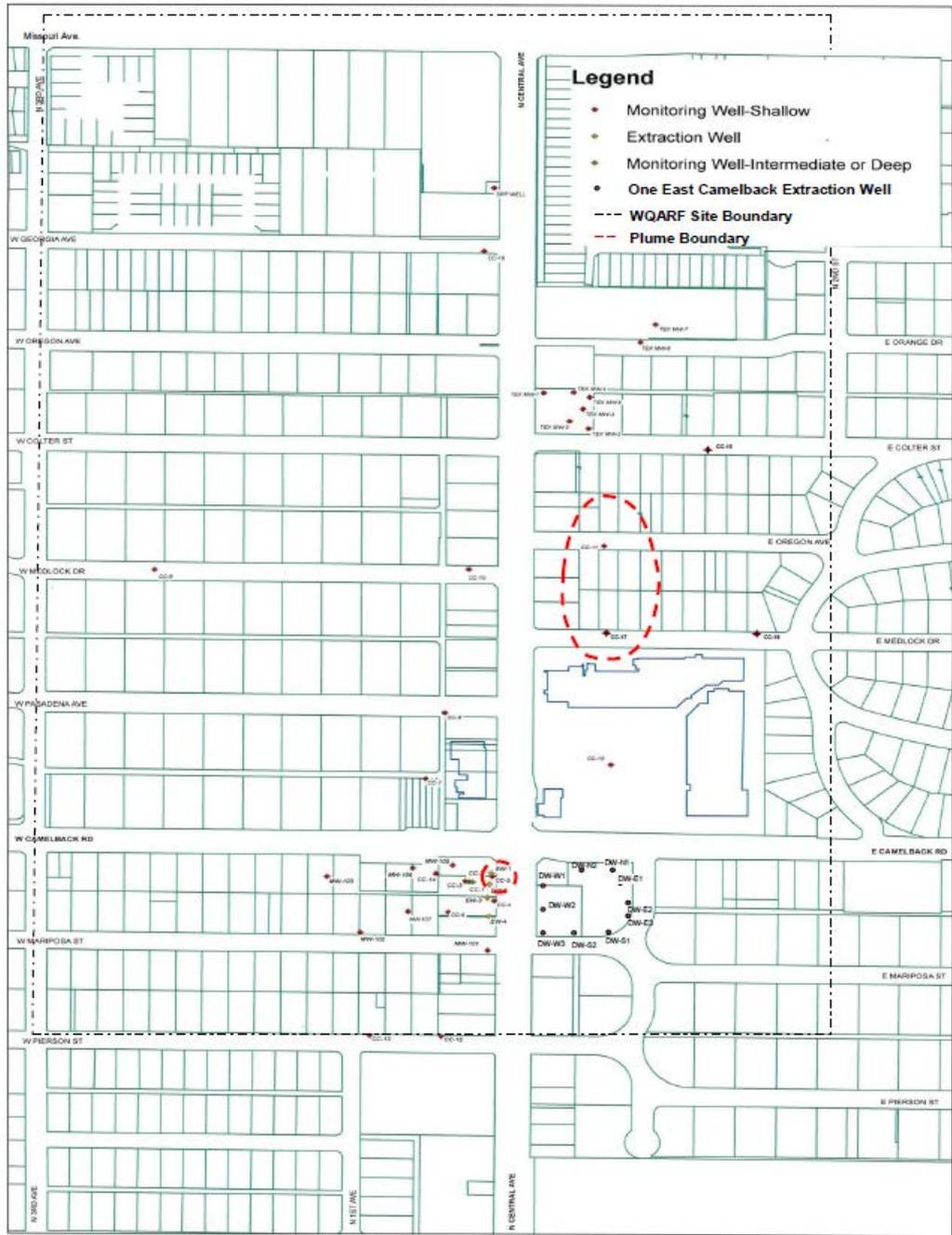
Kevin Snyder, Project Manager

Caroline Oppleman, Community Involvement Coordinator

March 11, 2015 5:30 pm

## WQARF PHASES





**SITE MAP**

**Figure 1**

Groundwater Treatment Compound



EW-1

CC-5

EW-2

EW-3

SVE Compound

SVE-1

SVE-FC

SVE-MP1

SVE-2S  
SVE-2D

EW-4

SVE-MP2

# Events Since May 2014

## CAB Meeting

- Completed the Remedial Investigation (RI) Report and initiated the Feasibility Study (FS) Phase of Investigation.
- The SVE system has removed 6,495 lbs. of PCE from soil as of the end of December 2014.
- The groundwater system has removed 332.8 lbs. of PCE from water as of the end of December 2014.
- Groundwater samples were collected from the groundwater monitor wells during December 2014 and documented in the semi annual report for 2014.

# Events Since May 2014

## CAB Meeting (continued)

- Groundwater samples were collected from the extraction wells and groundwater treatment system quarterly and monthly, respectively. Vapor samples were collected from the SVE system monthly.
- The groundwater system has shutdown during January for SRP canal dry out and cleaning.
- The SVE system has been fully operational since last CAB meeting.
- Groundwater treatment system and SVE system will continue to operate as presently funded.



# Analytical Results From Groundwater Treatment System Extraction Wells

- Currently Only Extraction Wells CC-5 and EW-2 Are Operating and Are Sampled
  - Extraction Well EW-4 was shutdown on January 20, 2009
  - Extraction Well EW-3 was shutdown on May 6, 2009
  - Extraction Well EW-2 was shutdown on May 20, 2009 and restarted on October 29, 2009
  - Extraction Well EW-1 was shutdown on March 13, 2013

## PCE Concentrations In Extraction Well Samples

WELL Number	March 2014	June 2014	Sept. 2014	Dec. 2014
CC-5	40	32	28	23
EW-1	NS	NS	NS	NS
EW-2	12	11	11	9.3
EW-3	NS	NS	NS	NS
EW-4	NS	NS	NS	NS

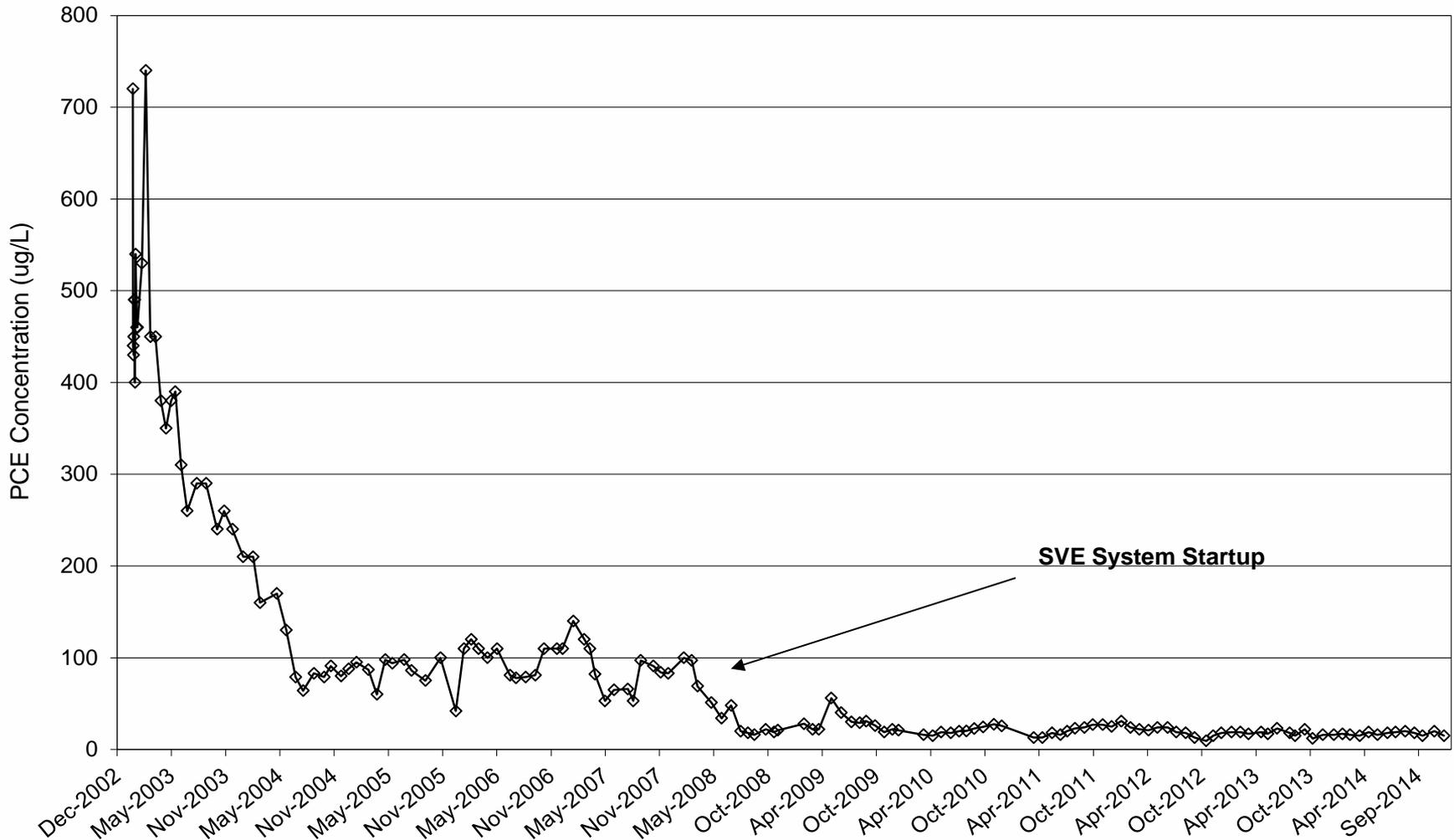


# Operation & Maintenance Statistics for the GW Treatment System

<b>Quarter</b>	<b>Gallons Treated</b>	<b>Percent Operational</b>	<b>VOC/PCE Removed (Lbs.)</b>
1 <sup>st</sup> Qtr 2014	6,215,140	100%	1.13/0.83
2 <sup>nd</sup> Qtr 2014	5,836,010	100%	1.15/0.85
3 <sup>rd</sup> Qtr 2014	5,343,700	99.9%	1.16/0.89
4 <sup>th</sup> Qtr 2014	5,055,900	96.1%	0.98/0.70
<b>Analyte</b>	<b>Range 1<sup>st</sup> &amp; 2<sup>nd</sup> Quarter 2003</b>	<b>December 2014</b>	<b>AWQS</b>
Benzene	<0.50 – 0.54	<0.50	5
Chloroform	1.8 – 2.8	3.3	100
PCE	350 - 740	15	5
TCE	9.7 – 16	1.7	5
Cis-1,2-DCE	8.5 - 20	0.58	70

Concentrations in micrograms per liter (ug/L)

# PCE Influent Concentration Changes With Time



Notes:  
AWQS = 5 ug/L



CC-16  
1070.52

TEX-MW-8  
1070.82

TEX-MW-1\*

TEX-MW-5\*

TEX-MW-2\*

CC-15  
1069.86

CC-9  
1071.74

CC-10  
1070.35

CC-11  
1070.78

CC-17  
1069.20

CC-19  
1068.77

CC-8  
1069.00

CC-7  
1068.18

CC-18\*

CC-3  
1065.23

CAMELBACK RD

MW-103  
1067.86

MW-105  
1065.99

MW-106  
1066.80

CC-14  
1066.40

CC-1\*

EW-1  
1063.45

CC-5\*

EW-2\*

MW-107  
1065.59

CC-6  
1065.78

EW-3  
1064.30

CC-4  
1064.41

EW-4  
1063.13

CC-13  
1066.40

CC-12  
1066.03

200 100 0 200 Feet

**Groundwater Elevations and Contours**  
December 2014  
Central and Camelback WQARF Site  
Phoenix, AZ

Geosyntec consultants  
Phoenix, AZ January 2015

**Figure**  
8

## SVE (soil) System Update

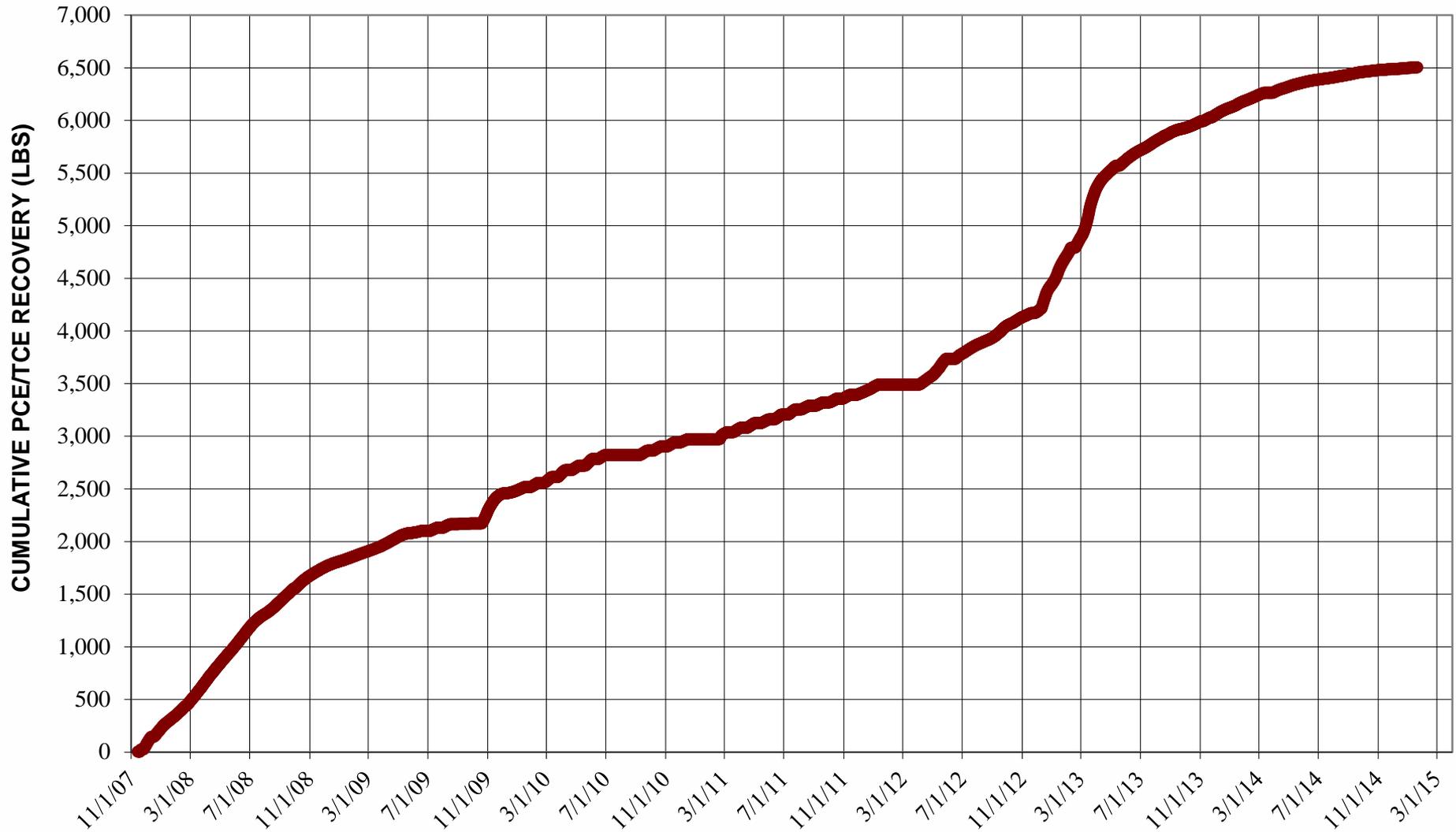
- During 2014, the SVE system removed approximately 379.2 pounds of VOCS.
- Since SVE system startup in November 2007 to the end of December 2014 approximately 6,495 lbs. of VOCs.
- Conducting quarterly performance tests as required by the air quality permit.



# Operation & Maintenance Statistics for the (SVE) system

Quarter	Percent Operational	PCE/TCE Removed (Lbs.)
1 <sup>st</sup> Qtr 2014	79%	144.6
2 <sup>nd</sup> Qtr 2014	99.9%	125.7
3 <sup>rd</sup> Qtr 2014	100%	73.0
4 <sup>th</sup> Qtr 2014	100%	37.7

# PCE Influent Concentration Changes With Time



## Future Planned Work

- Complete the FS for the Site
- Continue O&M activities for both SVE and GW systems.
- Monitor water levels monthly and collect groundwater samples semi annually.



# Contacts

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