



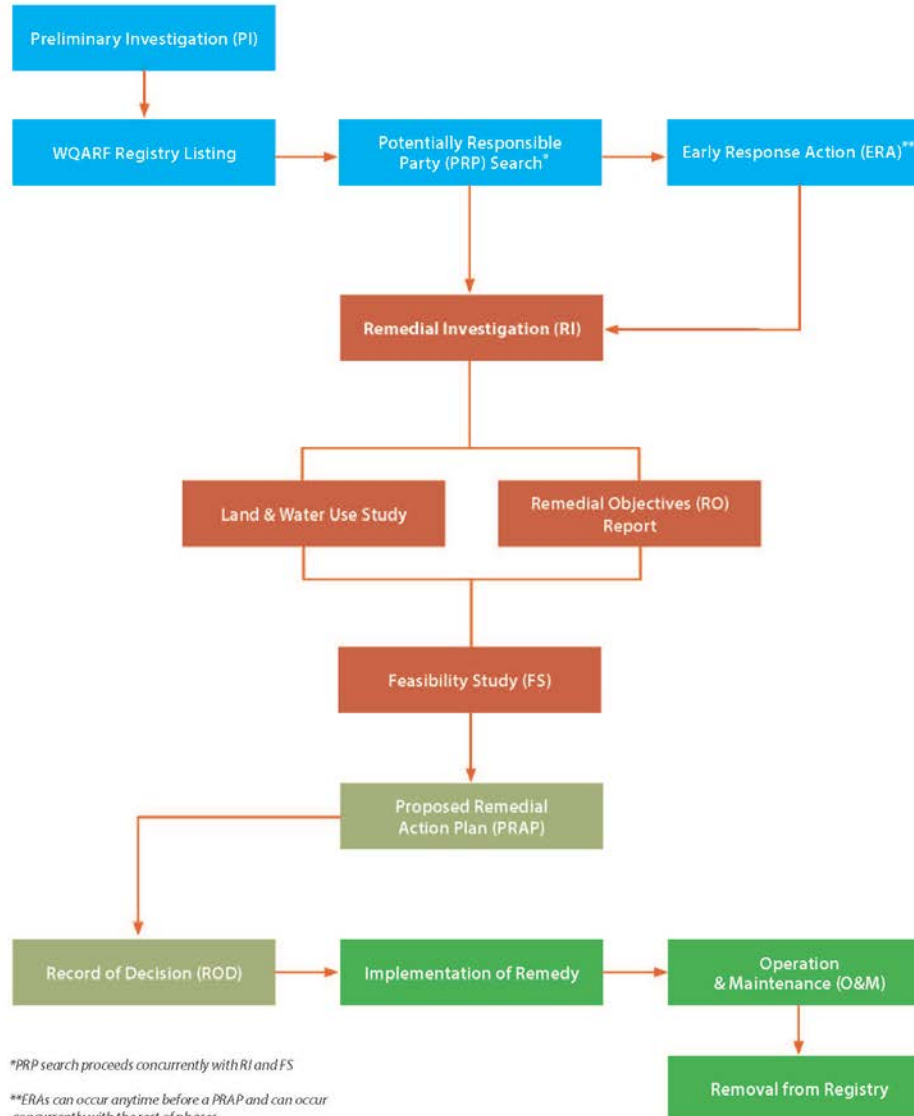
# 16<sup>th</sup> Street and Camelback WQARF Site

Kevin Snyder, Project Manager

Caroline Oppleman, Community Involvement Coordinator

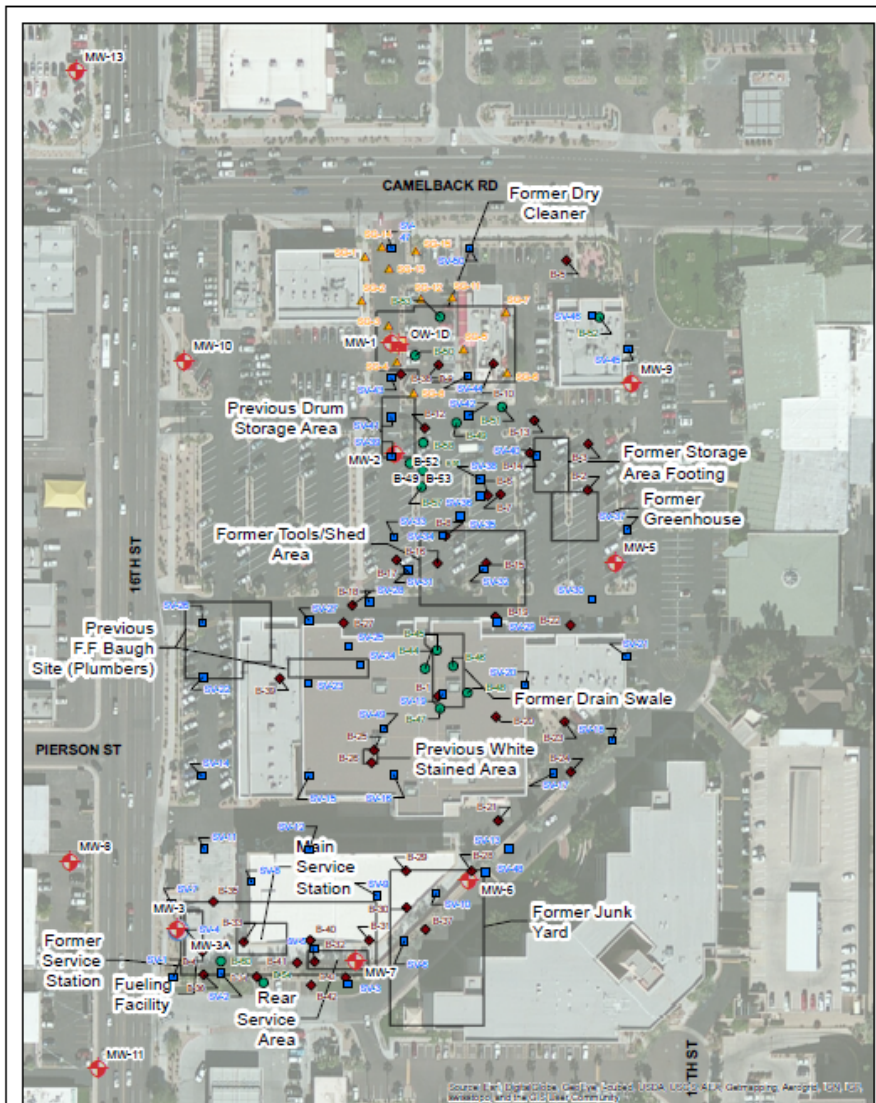
March 11, 2015 5:30pm

## WQARF PHASES





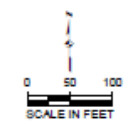
**Figure 1**  
**SITE LOCATION MAP**  
 REMEDIAL INVESTIGATION  
 SUMMARY REPORT  
 16TH STREET AND CAMELBACK WQARF SITE  
 PHOENIX, ARIZONA



Source: Esri, DigitalGlobe, GeoEye, Earthstar (USA), CNR, GEBCO, AeroGRID, IGN, Esri, Swisstopo, and the GIS User Community

**EXPLANATION**

- SOIL VAPOR SAMPLE (LAW, 1993a)
- ◆ SOIL VAPOR SAMPLE (LAW, 1993a)
- ▲ SOIL VAPOR SAMPLE (LAW, 1993b)
- ▲ SOIL VAPOR SAMPLE (ADEQ, 2005)
- ◆ MONITOR WELL
- OBSERVATION WELL
- REPLACEMENT MONITOR WELL
- FORMER BUILDING OR AREA OF CONCERN

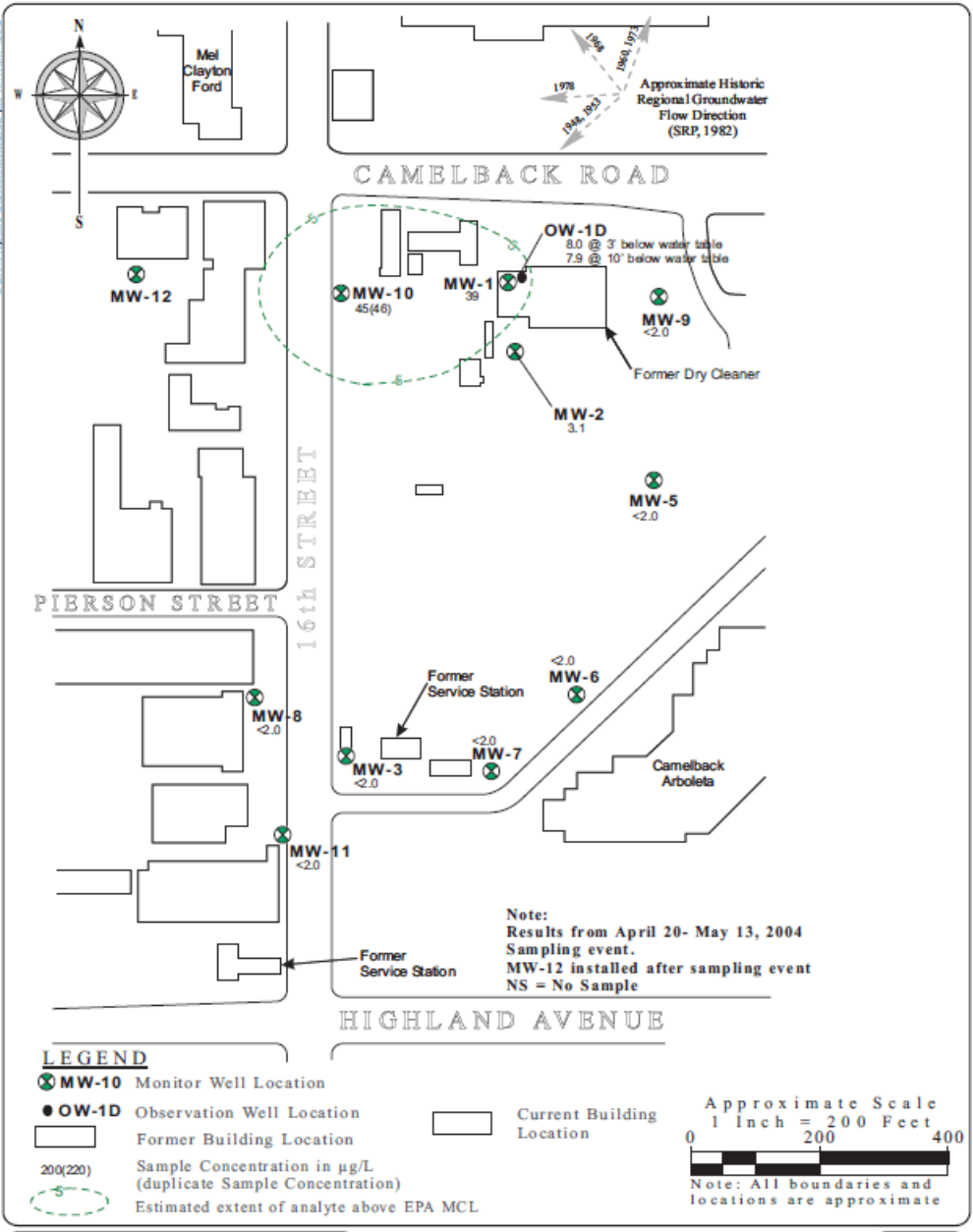


**Figure 4**  
**RI SAMPLING LOCATION MAP**  
 REMEDIAL INVESTIGATION  
 SUMMARY REPORT  
 16TH STREET AND CAMELBACK WQRF SITE  
 PHOENIX, ARIZONA

## 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

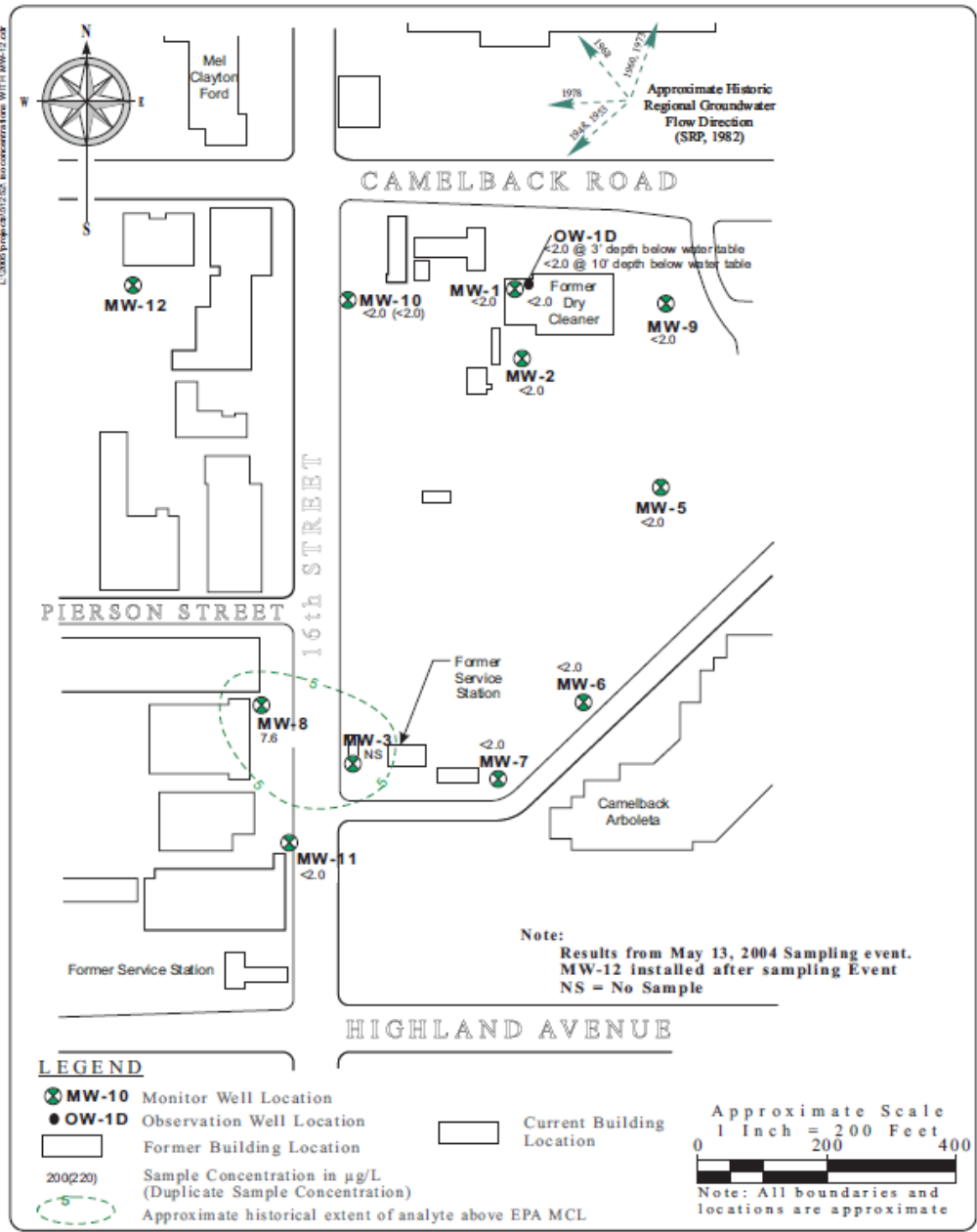


**KLEINFELDER**  
Project Number 51252 January 2005

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.

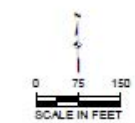
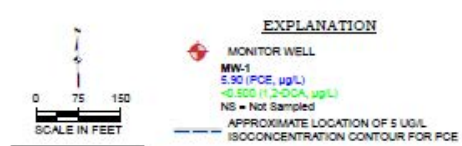


- PCE is currently the only contaminant of concern detected in groundwater at the site at concentrations greater than the Aquifer Water Quality Standard (AWQS).
- Contaminants appear to have naturally attenuated.

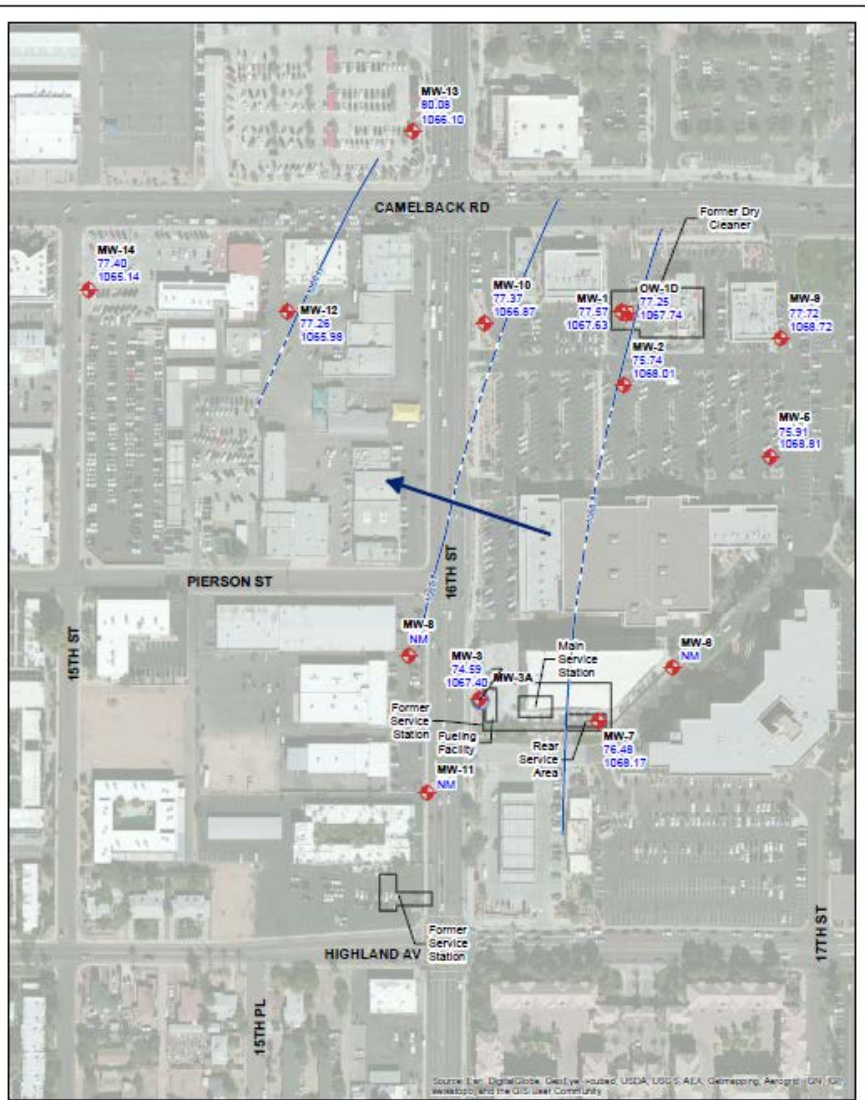
<b>Contaminant</b>	<b>December 28, 1999</b>	<b>August 30, 2007</b>	<b>April 17, 2014</b>
PCE	160 ug/l	20 ug/l	11.4 ug/l
1,2-DCA	400 ug/l	<2.0 ug/l	0.62 ug/l
1,2-DCP	15 ug/l	<2.0 ug/l	<0.5 ug/l



Source: ESRI, Digital Globe, GeoEye, GeoEye, USDA, USDA, ALA, GeoEye, AeroGRID, IGN, IGN, Swire, and the EO Satellite Consortium



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



**EXPLANATION**

- NORTH
- SCALE IN FEET
- MONITOR WELL
- MW-1**  
76.17 (DTW in ft below MP)  
1069.03 (Groundwater Elevation in ft AMSL)
- 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

Kevin Snyder, Project Manager  
Remedial Projects Section

[kcs@azdeq.gov](mailto:kcs@azdeq.gov)

(602) 771-4186, 1-800-234-5677 ext 771-4186

Caroline Oppleman, Community Involvement Coordinator  
Remedial Projects Section

[co2@azdeq.gov](mailto:co2@azdeq.gov)

(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)