

## 16th Street & Camelback Road Water Quality Assurance Revolving Fund Site — June 2014

*This fact sheet is a publication of the Arizona Department of Environmental Quality (ADEQ) to inform community members near the 16th Street & Camelback Road Water Quality Assurance Revolving Fund (WQARF) site of current site activities in Maricopa County. If you receive your drinking water from the City of Phoenix, your current drinking water is not affected by the groundwater contamination at the site.*

*A glossary of terms is located at the end of this fact sheet.*

### Site History and Investigation

In 1993, ADEQ was approached by Bank One to consider reaching a settlement agreement regarding a vacant property located at 16th Street & Camelback Road in Phoenix. Investigations conducted at the site disclosed total petroleum hydrocarbons (TPH) contaminated soil and ground water contaminated with tetrachloroethylene (PCE) in the north plume and dichloroethane (1,2, DCA) and benzene in the south plume. The site is bounded by Medlock Drive to the north, 17th Street to the east, Highland Avenue to the south, and 15th Street to the west (See Figure 1).

Initial reports indicate that a former commercial plant nursery at the site used fertilizers, pesticides, and herbicides. The plant nursery also had an underground storage tank (UST) and a vehicle service pit. A soil vapor survey was performed and soil vapor access holes were installed to depths of 5 to 10 feet below ground surface (bgs). Samples were analyzed on site for volatile organic compounds (VOC), benzene, toluene, ethyl benzene and xylene. All of these constituents were detected in several samples but at relatively low concentrations.

### Scope of Work, Outline of Community Involvement Plan, and Fact Sheet

*Availability Notice Pursuant to A.R.S. §49-287.03 (c) (d), ADEQ is announcing the availability of the scope of work, outline of a community involvement plan and fact sheet. A public meeting may be called to address any comments. To obtain copies, contact Caroline Oppleman at (602) 771-6890.*

A consent decree between ADEQ and Bank One was lodged in court on January 11, 1994. An additional investigation was initiated which included the installation of six new monitor wells to determine the lateral and vertical extent of the TPH compounds and to localize and characterize potential on-site source(s). Petroleum contaminated soils identified earlier were excavated and thermally remediated on-site by ADEQ. At the close of the project between 1994 and 1995, 405 tons of petroleum contaminated soils had been treated.

In 1995, ADEQ conducted a second soil vapor survey at this site. A total of 15 samples were collected at depths of up to 10 feet bgs. The purpose of the survey was to identify the on-site sources of contaminants found in the ground water. Soil vapor survey results indicated detections of PCE at concentrations ranging from 1.3 to 2.3 micrograms per liter (µg/L) in four of the 15 samples collected. Results from this survey failed to

identify the source contributing to the ground water contamination.

In February of 1996, ADEQ initiated additional ground water characterization activities to identify ground water source areas at the site. ADEQ installed four additional ground water monitoring wells and four temporary ground water well points. Information gathered from this investigation also did not identify sources and did not establish the extent of contamination.

On April 21, 1999, the site was added to the WQARF Registry with an eligibility and evaluation score of 23 out of a possible 120.

In May of 2002, ADEQ began an early response action (ERA) evaluation at the site. The ERA evaluation was designed to determine if soil vapor extraction and air sparge remediation was feasible to provide source control and remediate the PCE groundwater contamination.

In January of 2003, ADEQ installed two vapor extraction wells, one sparge point and two observation wells. A pilot study was conducted to determine the feasibility of installing a vapor extraction/air sparge remediation system. The results of the pilot study indicated that installation of a remediation system at the site is not feasible or cost effective.

An ERA report was completed in 2006. ADEQ initiated a remedial investigation (RI) in 2013. Based on the May 2013 groundwater sampling event, the current highest concentration of PCE and 1,2-DCA in groundwater was 31.9 µg/L and non-detect, respectively. The sampling results for 1,2-dichloropropane (DCP) continue to show no concentrations above laboratory reporting limits.

The Arizona Aquifer Water Quality Standards (AWQS) for PCE, 1,2-DCP, and 1,2-DCA is 5.0 µg/L.

Sampling of the southern plume (formally at the southeast corner of Pierson Street and 16th Street) indicates that the concentrations of 1,2-DCA in groundwater is still below AWQS levels. The southern plume appears to have naturally attenuated.

**What are the health risks associated with this contamination?**

There are no known drinking water production wells within the boundaries of the site. The drinking water supplied by the City of Phoenix meets all federal and state drinking water standards.

People who drink water containing PCE in excess of the regulatory levels over many years could experience problems with their liver and may have an increased risk of cancer. The contaminated groundwater in this area is not used for

drinking water. The listing of the site on the WQARF Registry does not necessarily represent a determination that the release of a hazardous substance at the site poses a threat to human health or the environment.

**What are ADEQ’s future plans at this site?**

ADEQ’s current plans for the site are to finish the RI phase of the project. Most, if not all, of the site characterization work is completed at the site. ADEQ will consolidate all the existing site characterization data, combined with a study of land and water uses in the area, into an RI report. The site will then proceed through a feasibility study (FS) that will analyze potential cleanup methods for achieving the cleanup goals determined during the RI.

**What are the contaminants at this site?**

The site was divided into a northern and a southern portion. The current con-

taminants of concern in groundwater include PCE at the northern portion of the site and DCP and 1,2-DCA in the former southern portion of the site.

**COMMUNITY INVOLVEMENT**

ADEQ will keep the public informed through a variety of means including fact sheets and public meetings. ADEQ is assembling a mailing list and has formed a Community Advisory Board (CAB) to advise ADEQ and the public of issues and concerns related to investigations and remediation of the site. The purpose of the CAB will be to:

- provide comments to ADEQ on the cleanup and investigation issues related to the WCP site;
- represent a diversified cross-section of the community in and around the WCP site;
- participate in outreach to the community; and
- make site visits if desired.

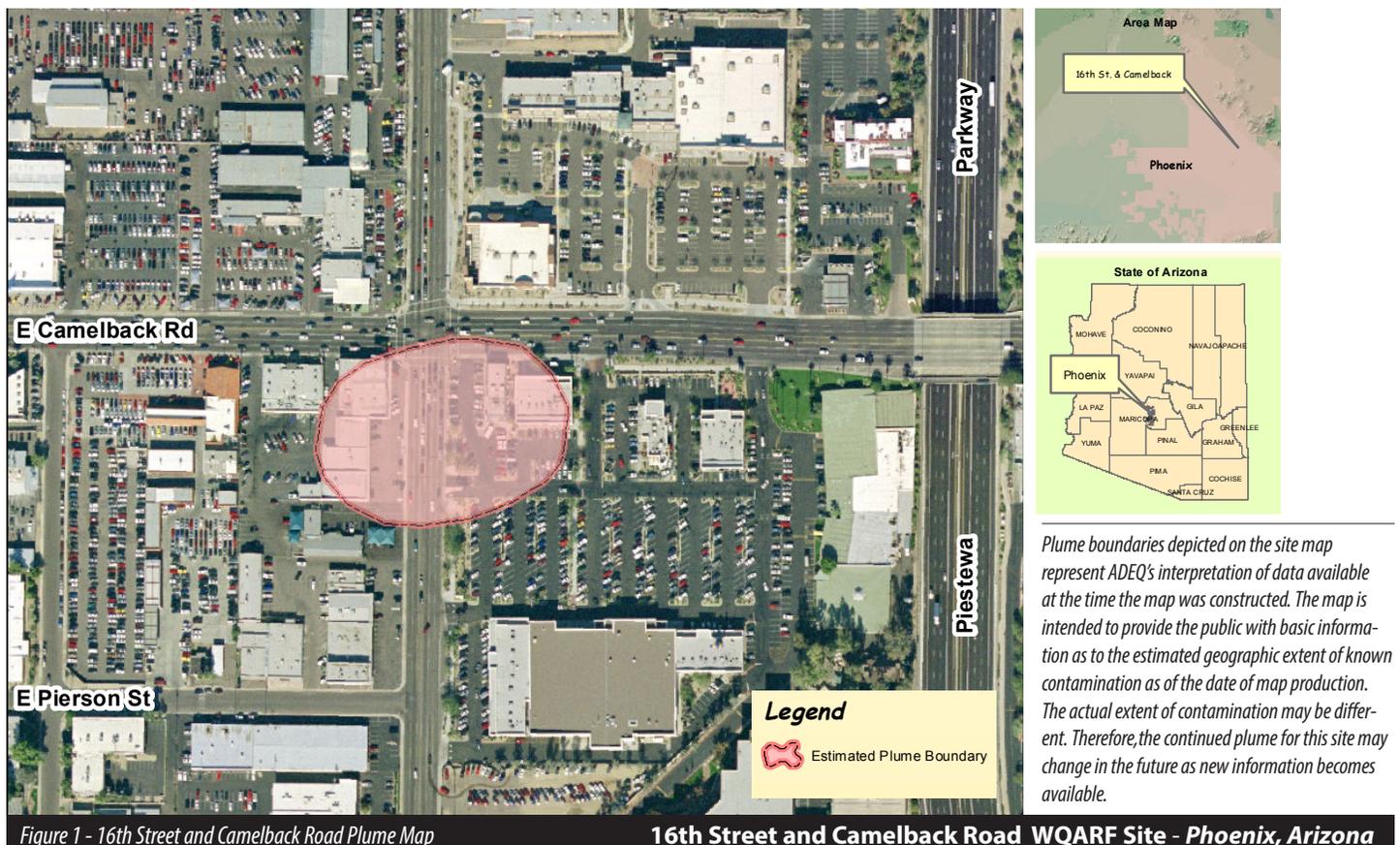


Figure 1 - 16th Street and Camelback Road Plume Map

16th Street and Camelback Road WQARF Site - Phoenix, Arizona

Plume boundaries depicted on the site map represent ADEQ’s interpretation of data available at the time the map was constructed. The map is intended to provide the public with basic information as to the estimated geographic extent of known contamination as of the date of map production. The actual extent of contamination may be different. Therefore, the continued plume for this site may change in the future as new information becomes available.



Figure 2 - Drilling of groundwater wells at 16th Street site.

**CAB Members Needed**

ADEQ is currently looking for members of the public to serve on the CAB to represent the 16th Street & Camelback area.

- Are you concerned about the environment and protecting public health?
- Do you live, work, own property or a business in the area of the site and/or are you interested in the site?
- Do you have a minimum of two hours a day four times a year to volunteer?

If you answered yes to any of the questions and would like to apply to be a member of the CAB and represent the 16th Street & Camelback area, please fill out and complete the enclosed application. For more information on community involvement activities at the site please call Caroline Oppleman, ADEQ Community Involvement Coordinator, at (602) 771-6890 or 1-800-234-5677 Ext. 771-6890.

**Information Repository**

Within 24-hour notice, an appointment to review related documentation is available Monday through Friday from 8:30 a.m. to 4:30 p.m. at ADEQ Records Management Center, 1110 W. Washington

Street in Phoenix. Please contact (602) 771-4389 to schedule an appointment to review these documents.

**What is WQARF and the Registry?**

The WQARF Program was established by Arizona law to:

1. conduct statewide surface and groundwater monitoring;
2. study health effects;
3. perform emergency remedial actions; and
4. conduct long-term remedial action programs.

ADEQ has established a registry of sites in Arizona where groundwater and/or soil contamination are known to be present. Sites appearing on this registry qualify for funds for investigation and/or cleanup of contamination. The WCP sites are included on this registry. For further information on this site or other WQARF sites, please visit the ADEQ Web site at:

[www.azdeq.gov](http://www.azdeq.gov).

Click on Waste Programs, then click on Superfund/WQARF programs. Follow the links to get to the information that you need.

**ADEQ Contacts:**

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Hearing impaired persons may call **ADEQ's TDD line** at (602) 771-4829.

*Si desea esta información en Español, por favor comuníquese con Ray Ortega al (602) 771-4457 o sin tarifa dentro de Arizona al (800) 234-5677, ext. 771-4189.*

## **Glossary**

### ***Aquifer Water Quality Standard (AWQS)***

These are standards set to protect the quality of the water in aquifers for present and foreseeable uses, including consumption of the water by humans.

### ***Cleanup***

Actions taken that deal with a release or threats of a release of a hazardous substance that could affect people or the environment. The term "cleanup" is sometimes used interchangeably with the terms remedial action, removal action, response action, remedy, remediation, or corrective action.

### ***Contamination***

Any hazardous substance released into the environment.

### ***Early Response Action (ERA)***

Refers to a remedial action performed prior to the final remedy, and often prior to the remedial investigation. An ERA addresses current risks to public health, welfare, and the environment; protects or provides a supply of water; addresses sources of contamination; or controls or contains contamination where such actions are expected to reduce the scope or cost of the remedy needed at the site.

### ***Feasibility Study (FS)***

A process to identify a reference remedy and alternative remedies that appear to be capable of achieving the remedial objectives for the site. It is often done as part of a two-phase investigation in conjunction with a remedial investigation (RI/FS).

### ***Groundwater***

Water found beneath the earth's surface that fills pores between materials such as sand, clay, or gravel. In aquifers, groundwater occurs in sufficient quantities that it can be used for drinking water, irrigation, and other purposes.

### ***Natural Attenuation***

The reduction of contaminant concentrations in the environment through biological processes, physical phenomena, and chemical reactions.

### ***Remediation***

Actions taken to deal with the release of a hazardous substance that could affect people or the environment. Also see the term "cleanup."

### ***Soil Vapor (Soil Gas)***

Gaseous elements and compounds that occur in the small spaces between soil particles. Such gases can move through or leave the soil or rock, depending on changes in concentrations or pressure.

### ***Tetrachloroethene (PCE)***

A clear, colorless, nonflammable solvent that readily evaporates at room temperature. PCE is widely used for dry cleaning of fabrics and degreasing/drying of metals.

### ***Volatile organic compounds (VOCs)***

A large group of carbon-containing chemicals that readily evaporate at room temperature. Examples of VOCs are isopropyl alcohol (rubbing alcohol), acetone (found in some nail polish removers), and

the solvents PCE and TCE (used in dry cleaning and metal degreasing).

### ***Water Quality Assurance Revolving Fund (WQARF)***

A program administered by ADEQ to (1) conduct statewide surface and groundwater monitoring; (2) study health effects; (3) perform emergency remedial actions; and (4) conduct long-term remedial action programs. Also known as "State Superfund Program."