

East Central Phoenix (ECP) 40th Street and Indian School Road Water Quality Assurance Revolving Fund ([WQARF](#)) Site

Boundaries:

The ECP 40th Street and Indian School Road WQARF (site) plume in Phoenix, Arizona is bounded by Devonshire Avenue to the north, 40th Street to the east, East Picadilly Road to the south, and 38th Place to the west.

The plume boundaries depicted on the [site map](#) represent the Arizona Department of Environmental Quality's (ADEQ) interpretation of the data available at the time the map was constructed. The map is intended to provide the public with basic information as to the estimated extent of known contamination as of the date of map production. The actual extent of contamination may be different. Therefore, the plume may change in the future as new information becomes available.

Site Status Update:

ADEQ conducted groundwater sampling in 2008, using [passive diffusion bag samplers](#) in the [monitor wells](#). The highest concentration of [tetrachloroethene](#) (PCE) in groundwater during the October 2008 sampling event was 180 micrograms per liter ($\mu\text{g/l}$).

ADEQ installed a new well cluster (AMW9A-C) to investigate the vertical and lateral extent of the plume [downgradient](#) from the Kachina Dry Cleaners on 39th Street north of Indian School Road. Analytical results from the well indicate that the vertical extent of the plume has been assessed, but the plume is still not laterally defined to the southwest. An additional nested well (AMW10A-B) was installed in October 2008 on Monterosa Street downgradient, of the former Allen's Dry Cleaners. Initial sampling results indicate the well is non-detect for PCE.

Community Involvement Activities:

A [community advisory board](#) (CAB) was formed in November 2007. Details of CAB meeting [agendas](#) and minutes for can be viewed at the ADEQ website. These meetings are open to the public.

Site History:

1989: This site is part of the ECP study area, which is bounded by Camelback Road to the north, McDowell Road to the south, 50th Street to the east and 20th Street to the west. Soil vapor surveys were conducted at multiple facilities throughout the ECP study area to determine if a release of contaminants to the subsurface had occurred. In October, one [soil vapor](#) sample was collected north of the Kachina Cleaners facility at a depth of 16.5 feet below ground surface (bgs). The concentration of PCE detected in the soil vapor sample was 270 $\mu\text{g/L}$. A second soil vapor sample was collected north of the former Allen's Cleaners facility at a depth of 15.2 feet bgs. The concentration of PCE detected in the soil vapor sample was 370 $\mu\text{g/L}$.

1992: Five soil [borings](#) were drilled adjacent to the former Allen's Cleaners facility. The soil concentrations of PCE ranged from less than the laboratory reporting limit to 0.188 milligrams per kilogram (mg/kg). ADEQ also installed three groundwater monitoring wells: one directly north, one directly west, and one approximately 0.5 miles south of the former Allen's Cleaners facility. The initial groundwater samples collected from the wells had PCE concentrations that ranged from less than the laboratory reporting to 8,700 µg/L.

1993: One of the two solvent vaults was excavated from the former Allen's Cleaners facility and three vapor extraction wells were installed beneath the excavated area. From 1993 to 1994, ADEQ operated a [soil vapor extraction](#) (SVE) system to remove contaminated vapors from the vadose zone soil at a rate of approximately 0.22 pounds of PCE per day.

1994: ADEQ installed a groundwater monitoring well west of the Kachina Cleaners facility. The initial groundwater sample collected from the well had a PCE concentration of 55 µg/L. During a routine groundwater monitoring event, the maximum PCE concentration observed throughout the site was 31,000 µg/L.

1996: Nine soil borings were drilled in and around the Kachina Cleaners facility to conduct a soil vapor survey. The soil concentrations of PCE ranged from less than the laboratory reporting to 0.0056 mg/kg. The soil vapor concentrations of PCE ranged from 41 µg/L to 460 µg/L. During a routine groundwater monitoring event, the maximum PCE concentration observed throughout the site was 11,000 µg/L.

1997: Groundwater, soil, and soil vapor surveys were conducted at the former Allen's Cleaners. PCE in groundwater was detected with concentrations ranging from less than the laboratory limit to 316 µg/L. Soil samples did not contain detectable concentrations of PCE. Soil vapor concentrations of PCE ranged from 0.13 µg/L to 33 µg/L. ADEQ also installed four groundwater monitoring wells west of the former Allen's Cleaners facility. The initial groundwater samples collected from the wells had PCE concentrations that ranged from less than the laboratory reporting to 1,800 µg/L.

ADEQ also collected groundwater and soil samples from a boring located within the vicinity of the Kachina Cleaners facility. PCE in groundwater was detected with concentrations ranging from less than the laboratory limit to 800 µg/L. The soil samples did not contain detectable concentrations of PCE.

During a routine groundwater monitoring event, the maximum PCE concentration observed throughout the site was 18,000 µg/L.

1998: The site was placed on the [WQARF Registry](#) with a score of 20 out of a possible 120. During a routine groundwater monitoring event, the maximum PCE concentration observed throughout the site was 37,000 µg/L.

2002: During a routine groundwater monitoring event, the maximum PCE concentration observed throughout the site was 22,000 µg/L.

2003: ADEQ installed a groundwater monitor well in the alley between the former Allen's Cleaners and Kachina Cleaners facilities. The initial groundwater samples collected from the well had shallow and deep PCE concentrations of 55 µg/L and 75 µg/L, respectively. As part of an [early response action](#) (ERA), ADEQ installed three SVE wells and six [air sparge](#) (AS) wells at the former Allen's Cleaners facility.

During a routine groundwater monitoring event, the maximum PCE concentration observed throughout the site was 5,900 µg/L.

2004: The construction of the SVE/AS system located at the former Allen's Cleaners facility was completed and the system became operational in November. During a routine groundwater monitoring event, the maximum PCE concentration observed throughout the site was 1,330 µg/L.

2005: The SVE/AS system located at the former Allen's Cleaners facility was shutdown and removed from the site in July. The SVE/AS system had removed approximately 33 pounds of PCE from the vadose zone soil throughout its operation. During a routine groundwater monitoring event, the maximum PCE concentration observed throughout the site was 95 µg/L.

2006: Three soil borings were drilled near the Kachina Cleaners facility to conduct a groundwater, soil, and soil vapor survey. PCE in groundwater was detected with concentrations ranging from 1.2 µg/L to 400 µg/L. Soil sample concentrations of PCE ranged from less than the laboratory limit to 0.12 mg/kg. Soil vapor concentrations of PCE ranged from less than the laboratory limit to 6.7 µg/L. ADEQ also installed a groundwater monitoring well adjacent to the Kachina Cleaners facility. The initial groundwater samples collected from the well had shallow and deep PCE concentrations that were less than the AWQS for PCE of 5 µg/L.

During a routine groundwater monitoring event, the maximum PCE concentration observed throughout the site was 78 µg/L.

2007: In June, ADEQ sent out notices per A.R.S. §49-287.03 initiating the [remedial investigation](#) for the site. During a routine groundwater monitoring event in the fall, the maximum PCE concentration observed throughout the site was 62 µg/L.

In December, ADEQ installed an additional groundwater well, located on 39th Street north of Indian School Road. The initial groundwater samples collected from the well had depth-specific PCE results that ranged from less than the laboratory reporting limit up to 310 µg/L.

2008: ADEQ installed two additional groundwater wells: one located on 39th Street north of Indian School Road and one located on Monterosa Street, south of the former Allen's Cleaners facility. The initial groundwater samples collected from the wells had depth-specific PCE results that ranged from less than the laboratory reporting limit up to 120 µg/L.

2009-2012: No work was performed by ADEQ on the site.

Contaminants:

The current contaminants of concern in groundwater include PCE and [trichloroethene](#) (TCE). Contaminants of concern at the site may change as new data becomes available.

Public Health Impact:

There is currently no known threat of direct exposure to the public from the contamination at the Site.

Site Hydrogeology:

The site is located within the West Salt River Valley sub-basin of the [Phoenix Active Management Area](#). The Salt River Valley is an [alluvial](#) filled basin, located in the basin and range physiographic province.

The site is underlain by sandy and gravelly clay from ground surface to approximately 110 feet bgs. [Bedrock](#) is encountered at approximately 110 feet bgs. Based on 2008 measurements from monitor wells, groundwater is encountered at approximately 45 feet bgs and flows to the southwest.

Contacts:

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*In Arizona, but outside the Phoenix area, call toll-free at (800) 234-5677.

Information Repository:

Interested parties can review site information at the ADEQ Main Office located at 1110 W. Washington Street, Phoenix, AZ 85007. Please contact (602) 771-4380 or (800) 234-5677 to schedule an appointment with 24-hour notice to review these documents. Once all documents requested have been collected, you will be contacted for a review Monday through Friday from 8:30 A.M. to 4:30 P.M. at the ADEQ Records Center, 1110 W. Washington Street, Phoenix, AZ 85007.