

East Central Phoenix (ECP) 32nd Street and Indian School Road Water Quality Assurance Revolving Fund ([WQARF](#)) Site

Boundaries:

The ECP 32nd Street and Indian School Road WQARF Site (Site) in Phoenix, Arizona has two separate areas of groundwater contamination. The plumes are bounded by E. Monterosa Street to the north, 30th Street to the west, E. Clarendon Avenue to the south, and 32nd Place to the east. The northwest plume is approximately 200 feet wide by 300 feet long. The northeastern edge is approximately 150 feet south of Monterosa Street and 50 feet west of 32nd Street. The southwestern edge is approximately 75 feet north of Indian School Road and 350 feet west of 32nd Street. The southeastern plume is approximately 200 feet wide by 500 feet long. The northeastern edge of this plume is approximately 25 feet south of Indian School Road and 100 feet east of 32nd Street. The southwestern edge is approximately 400 feet south of Indian School Road and 200 feet west of 32nd Street.

The plume boundaries depicted on the [Site map](#) represent the Arizona Department of Environmental Quality's (ADEQ) 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 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:

The ADEQ [soil vapor extraction](#) (SVE) system at the former Vikings Cleaners has removed approximately 3,020 pounds of [tetrachloroethene](#) (PCE) as of the end of January 2008. Because it had reached the appropriate cleanup criteria, the SVE system has been shut down and removed from the Site.

ADEQ is working with the retail center on the southwest corner of 32nd Street and Indian School Road for access to drill two [monitor wells](#) for further plume definition. A monitor well was installed in Fairmont Avenue southwest of the Site for plume definition.

Community Involvement Activities:

A [community advisory board](#) (CAB) was formed in November 2007. Details of CAB meeting [agendas](#) and minutes for 2008 and 2009 can be viewed at the ADEQ Web site. These meetings are open to the public. The most recent [site update sheet](#) can be found on the ADEQ Web site.

Site History:

1989: This Site was part of the ECP study area, which was bounded by Camelback Road to the north, 48th Street to the east, Thomas Road to the south, and 24th Street to the west. Soil gas

surveys were conducted at multiple facilities throughout the ECP study area to determine if a release of hazardous substances had occurred.

1989-1994: The [underground storage tanks](#) and associated piping was removed from Unocal #6453, formerly located at 3201 E. Indian School Road. During these activities, two waste oil tanks (eastern and western) were excavated. During the 1994 investigation, a sample of the sludge from the western waste oil tank was analyzed and contained 68 milligrams per kilogram (mg/kg) of PCE. Additionally, a soil sample collected from a depth of 12 feet below ground surface (bgs) beneath the western waste oil tank contained 13 mg/kg of PCE.

2000: In May, the Site was placed on the [WQARF Registry](#) with a score of 29 out of a possible 120. In June, a limited Phase II investigation was conducted at Maroney's Cleaners located on the northwest corner of 32nd Street and Indian School Road. This included a [soil vapor](#) survey to 15 feet bgs and installation and sampling of two groundwater monitor wells. The highest concentration of PCE in soil gas was 15,000 micrograms per liter ($\mu\text{g}/\text{l}$) from a sample collected at 15 feet bgs in the alley just north of Maroney's. The highest concentration of PCE in groundwater during this June 2000 sampling event was 28 $\mu\text{g}/\text{l}$ in a sample collected from five feet below the water table in Well MW-2.

2003: In March, an [early response action](#) (ERA) investigation was conducted at the former location of Viking Cleaners at 4029 N. 32nd Street. This included completion of four soil [borings](#) with collection of soil gas, soil solid, and a hydropunch groundwater sample. Two of the soil borings were completed inside the building. Results of this investigation indicate that a release of PCE to the subsurface has occurred at this facility, and this release has impacted groundwater. Additionally, samples of the air inside this building and the adjacent convenience mart were collected in April 2003. The [Arizona Department of Health Services](#) (ADHS) evaluated this data and provided a [health consultation](#) and determined there is no risk to employees under current use scenarios.

During routine monitoring, tetrachloroethene (PCE) was detected in [Salt River Project](#) (SRP) Well 17E-8N at levels above the Arizona [Aquifer Water Quality Standard](#) (AWQS) of 5.0 $\mu\text{g}/\text{l}$. The maximum PCE concentration of the SRP well was 82 $\mu\text{g}/\text{l}$ in January of 1996. The maximum PCE concentration of the nearby groundwater monitor wells was 3,600 $\mu\text{g}/\text{l}$ in June of 2003.

2004: In June, a [soil vapor extraction \(SVE\)/air sparge \(AS\)](#) system was installed at the Site. The system consists of three nested pairs of SVE wells; three air sparge wells; a blower; a compressor; two [granular activated carbon](#) vessels; and multiple safety shutdown control devices. ADEQ monitored SRP Well 17E-8N in addition to several nearby groundwater monitor wells on a semi-annual basis. The maximum PCE concentration of the nearby groundwater monitor wells was 12,900 $\mu\text{g}/\text{l}$ in October of 2004.

2004-2006: The SVE system was permanently started on December 20, 2004. Approximately 3,000 pounds of PCE have been extracted from the subsurface from December 2004 through November 2006. Soil vapor samples are routinely collected to monitor the performance of the system.

2006: An ERA investigation was conducted in January to determine what contamination remained in soil and groundwater near the Maroney's Cleaners facility. ADEQ installed three

additional groundwater monitor wells and soil vapor [extraction wells](#). Initial groundwater sampling from one well indicated a PCE concentration of 100 µg/l.

In March and April, as part of a prospective purchaser agreement, the new property owner of the former location of Viking Cleaners installed four soil vapor extraction wells inside the building. The wells were then connected to the soil vapor extraction system operated by ADEQ. In March, ADEQ installed a groundwater monitor well that is completed down to a conglomerate layer near the bottom of the [aquifer](#). Data from this well will help ADEQ define the vertical extent of the contamination within the aquifer.

Groundwater samples are collected from the monitor wells using [passive diffusion bags](#) on a semi-annual basis. PCE concentrations in groundwater during the October sampling event ranged from non-detect to 930 µg/l. The AWQS for PCE is 5.0 µg/l.

2007: ADEQ sent out notices in June per A.R.S. §49-287.03 initiating the [remedial investigation](#) for the Site. A new nested well, MMW-6, was installed immediately west of Well MMW-4 in May. The well was screened from 100 feet to 160 feet in two intervals to provide specific aquifer characteristics. October 2007 sampling results were below AWQS in this well.

2008: ADEQ continued to pursue the [downgradient](#) PCE plume delineation to the southwest. In this effort, monitor Well VCMW-4 was installed in Fairmont Street at the end of July.

Contaminants:

The current contaminants of concern in groundwater include [tetrachloroethene](#) (PCE) and [trichloroethene](#) (TCE). Contaminants of concern at the Site may change as new data become 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 silty sand and sandy silt with minor gravel lenses from ground surface to approximately 160 feet below ground surface (bgs). Conglomerate is encountered at approximately 160 feet bgs, and [bedrock](#) is encountered at approximately 215 feet bgs, based on the boring log for SRP Well 17E-8N.

Based on measurements during October 2006 from monitor wells, groundwater is encountered at approximately 45 feet bgs and groundwater flows to the southwest at a gradient of 0.01 feet per foot (ft/ft).

Contacts:

Name	Phone/Fax	Email
------	-----------	-------

Mike Beasley, ADEQ Project Manager	(602) 771-4414*/ (602) 771-4272 fax	mb11@azdeq.gov
Delfina Olivarez, ADEQ Community Involvement Coordinator	(602) 771-4710*/ (602) 771-4138 fax	dco@azdeq.gov

*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. With 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 the ADEQ Records Management Center, 1110 W. Washington Street in Phoenix, Arizona. Please contact (602) 771-4380 or (800) 234-5677 to schedule an appointment to review these documents.