

## **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:**

ADEQ continues to conduct a soil vapor investigation along 31<sup>st</sup> Street and Fairmont Avenue as part of the [remedial investigation](#) (RI).

### **Community Involvement Activities:**

A [community advisory board](#) (CAB) was formed in November 2007. Details of CAB meeting [agendas](#) and minutes can be viewed at the ADEQ Web site. These meetings are open to the public. The most recent [Site Update](#) 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 contaminants had occurred to the subsurface.

**1989-1994:** [Underground storage tanks](#) and associated piping were 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 [tetrachloroethene](#) (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. The limited Phase II investigation included a [soil vapor](#) survey to 15 feet below ground surface (bgs) and installation and sampling of two groundwater monitor wells. The highest concentration of PCE in soil gas was 15,000 micrograms per liter ( $\mu\text{g/l}$ ) from a sample collected at 15 feet bgs in the alley just north of Maroney's Cleaners. The highest concentration of PCE in groundwater during the June sampling event was 28  $\mu\text{g/l}$  from 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. The ERA included completion of four soil [borings](#) (two inside the former dry cleaning building) and the collection of soil gas and a hydropunch groundwater sample. Results of this investigation indicate that a release of PCE had occurred and the release had impacted groundwater. In April, air samples were collected from inside this building and the adjacent convenience mart. The [Arizona Department of Health Services](#) (ADHS) evaluated this data and provided a [health consultation](#) which determined that there is no risk to employees under current use scenarios.

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

**2004:** In June, a [soil vapor extraction \(SVE\)/air sparge \(AS\)](#) system was installed at the Site. Major components of the SVE/AS system consist of three nested pairs of SVE wells; three air sparge wells; a blower; a compressor and two [granular activated carbon](#) vessels. ADEQ monitors SRP Well 17E-8N and several nearby groundwater monitor wells on a semi-annual basis. The maximum PCE concentration of the nearby groundwater monitor wells was 12,900  $\mu\text{g/l}$  in October. The SVE/AS unit became operational on December 20th of this year.

**2004-2006:** From December 2004 through November 2006, approximately 3,000 pounds of PCE were extracted from the subsurface.

**2006:** In January, an ERA investigation was conducted 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  $\mu\text{g/l}$ .

In March and April, as part of a Prospective Purchaser Agreement (PPA), 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. During the October sampling event, PCE concentrations in groundwater ranged from below detection limits to 930 µg/l.

**2007:** In June, ADEQ sent out notices per A.R.S. §49-287.03 initiating the remedial investigation (RI) for the Site. In May, nested well MMW-6 was installed immediately west of Well MMW-4. The well was screened in two discrete intervals to provide information on specific aquifer characteristics. In October, groundwater samples collected from MMW-6 did not contain PCE above its AWQS of 5 µg/l.

**2008:** ADEQ continued to pursue the [downgradient](#) PCE plume delineation to the southwest. In July, monitor well VCMW-4 was installed in Fairmont Street. The ADEQ [soil vapor extraction](#) (SVE) system at the former Vikings Cleaners has removed approximately 3,020 pounds (PCE) as of the end of January 2008. Because it has reached the appropriate cleanup criteria, the SVE system has been shut down and removed from the Site.

**2009:** In June, as part of the RI work, a soil vapor investigation began. ADEQ pursues access to the retail center on the southwest corner of 32nd Street and Indian School Road to drill additional [monitor wells](#) for further plume definition. A monitor well was installed in Fairmont Avenue southwest of the Site for plume definition.

**2010:** ADEQ continues the soil vapor investigation by installing permanent soil vapor probes along Fairmont Avenue.

### **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 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. Based on the boring log for SRP Well 17E-8N, the Site is underlain by silty sand and sandy silt with minor gravel lenses from ground surface to approximately 160 feet bgs. Conglomerate rock is encountered at approximately 160 feet bgs and [bedrock](#) is encountered at approximately 215 feet.

Based on measurements from monitor wells in May 2010, groundwater is encountered at approximately 55 feet bgs and groundwater flows to the southwest.

**Contacts:**

Name	Phone/Fax	Email
Tina Le Page, ADEQ Project Manager	(602) 771-4293*/ (602) 771-4272 fax	<a href="mailto:lepage.tina@azdeq.gov">lepage.tina@azdeq.gov</a>
Felicia Calderon, ADEQ Community Involvement Coordinator	(602) 771-4167*/ (602) 771-4272 fax	<a href="mailto:fmc@azdeq.gov">fmc@azdeq.gov</a>

\*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. 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 Management Center, 1110 W. Washington Street in Phoenix, AZ.