

West Central Phoenix (WCP) West Osborn Complex Water Quality Assurance Revolving Fund ([WQARF](#)) Site

Boundaries:

The WCP West Osborn Complex WQARF Site (Site) plume is bounded approximately by the Grand Canal to the north, 31st Avenue to the east, McDowell Road to the south and 55th Avenue to the west in Phoenix, Arizona.

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:

Groundwater monitoring is conducted on a semi-annual basis by [United Industrial Corporation](#) (United) as part of a [consent decree. Feasibility Study](#) (FS) reports submitted by United to ADEQ addressing contamination impacting the lower sand and gravel [aquifer](#) unit are being evaluated.

Community Involvement Activities:

A [community advisory board](#) (CAB) has been formed for the Site. These meetings are open to the public. Details of meeting [agendas](#) and minutes can be viewed on the ADEQ Web site. The most recent [fact sheet](#) can be found on the ADEQ Web site.



SVE System at WOC Facility

Site History:

1950-1970: The West Osborn Complex (WOC) facility was originally one large property (about 15 acres) located near 35th Avenue and Osborn Road. From the late 1950s to the mid 1970s, companies at the property manufactured electronic components. These businesses used [trichloroethene](#) (TCE) and other chemicals in the production and cleaning process. ADEQ learned that large quantities of TCE and other wastes were disposed of in septic tanks and seepage pits at the WOC property from the late 1950s until the late 1960s. TCE was also dumped onto the ground.

1982-1989: [Volatile organic compounds](#) (VOCs) were first detected in groundwater in the WCP area in July 1982. The [City of Phoenix](#) (COP) detected TCE in four municipal public supply wells, COP wells #70, #71, #151, and #152. The [Arizona Department of Health Services](#), [Salt River Project](#) (SRP), and the COP confirmed the presence of VOCs in the groundwater with sampling in 1983,

1985, and 1986. Groundwater from COP wells #70 and #71 contained the highest concentrations of TCE and, therefore, were immediately shut down. Wells #151 and #152 were monitored for VOC concentrations from 1982 until 1989. As a result of sampling conducted during February of 1989, COP elected to take both wells #151 and #152 off-line on March 7, 1989.

1987-1997: In 1987, the WCP area was designated a WQARF Priority List site. In 1997, ADEQ established the WQARF Registry which replaced the Priority List.



A Seepage Pit at WOC

1996: United and ADEQ entered into a consent decree in Federal Court to conduct the [remedial investigation](#) (RI) and FS at the Site, and pay oversight costs. ADEQ also received \$250,000 on past and future costs.

1998: The Site was placed on the [WQARF Registry](#) with a score of 47 out of a possible 120.

1999-2002: United operated a [soil vapor extraction](#) (SVE) system from August 1999 through October 2002 to remediate the contamination beneath the WOC property.

2004: United completed the soil cleanup at the property and permanently shut down the SVE system in March. United abandoned the WOC irrigation well in July. The well is believed to have been the conduit to the deeper contamination found at the Site.

In August, ADEQ issued the draft RI report prepared by United for the WCP WOC Site for public comment to meet the requirements established under Arizona Revised Statutes §49-287.03 and Arizona Administrative Code (A.A.C.) R18-16-406. The Land and Water Use report prepared by ADEQ also went out for public comment. No comments were received during the 30-day comment period. A WCP CAB meeting was conducted in November, pursuant to A.A.C., R18-16-406(I)(1), to discuss the RI report, as well to obtain input on [Remedial Objectives](#) (ROs) for the Site.

2005: In April, ADEQ issued the proposed RO report for public comment to meet the requirements established under A.A.C. R18-16-406. Comments were received from the public and ADEQ issued the final RO report in May. In addition, since no comments were received on the draft RI report, this report has been accepted as the final RI report for the Site. In July, a notice was issued to the public indicating the availability of the final RI report and final RO report.

United submitted the FS Work Plan for review and approval in June. The FS Work Plan was approved at the end of June. United installed five additional wells between May and June as part of the ongoing FS. A groundwater report was submitted to ADEQ in August documenting the installation and sampling of the new wells.

2006: United is currently conducting the FS to evaluate specific remedial measures and strategies required to meet the ROs so that the groundwater can be remediated. In June, as part of the FS, United installed additional [monitor wells](#) to further define the extent of shallow groundwater

contamination emanating from the WOC property. These new wells showed concentrations of TCE above the Arizona [Aquifer Water Quality Standard](#) of 5.0 micrograms per liter (µg/l).

2007: ADEQ in conjunction with United agreed that the deep [aquifer](#) and the shallow aquifer shall be further characterized and remediated separately. The FS Work Plan prepared by United was revisited due to evidence that the shallow plume migrated further south than anticipated. An addendum to the FS Work Plan for the placement of new monitor wells was approved by ADEQ in August. Drilling activities were initiated in September. Results from these wells were incorporated into the FS for the shallow plume.

2008: United continued to monitor groundwater quality at the Site in both the shallow and deep contaminated aquifers below the former WOC facility.

2009: Monitor wells in both the shallow and deep aquifer were sampled twice during the year.

2010: United monitored and sampled groundwater on a semiannual basis.

Contaminants:

The current contaminants of concern in groundwater include the [chlorinated solvents tetrachloroethene](#) (PCE) and [trichloroethene](#) (TCE). Contaminants of concern at the Site may change as new data become available. Other contaminants at the Site include [methyl tertiary butyl ether](#) (MTBE) and [nitrates](#).

Public Health Impact:

To date, testing in the WCP area indicates no exposure to the contamination. Sampling shows that the contaminated soils are under asphalt parking lots or asphalt-surfaced storage areas, or under the concrete floors of buildings. Contaminated drinking water wells in the area have been shut down. In addition, notices have been sent out to all known residences within the WCP area for the testing of domestic wells for contamination.

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 lithology is characterized by a silty sand and sandy silt with interbedded clay layers and gravelly sand zones from ground surface to approximately 120 feet below ground surface (bgs). This is referred to as the water table aquifer. Beneath that, finer grained sediments dominate with minor coarser grained lenses to at least 800 feet bgs. There is one predominant coarser grained zone that is referred to as the lower sand and gravel subunit (LSGS). The LSGS is offset by a minor fault that trends east-west just south of the Site along Osborn Road. This fault does not act as a hydraulic barrier. The depth to the LSGS is approximately 250-300 feet bgs north of the fault and is

approximately 350-400 feet south of the fault. Both the water table aquifer and the LSGS have been impacted by TCE contamination.

The Grand Canal is located along the northern edge of the Site. The Grand Canal was unlined in the vicinity of the Site until January of 1998, when it was lined on the bottom and both sides. Prior to the lining, the canal provided extensive recharge to the water table aquifer, forming a mound in the water table. After the canal was lined, the mound dissipated and water levels dropped, most significantly near the canal.

Depth to groundwater has declined considerably in the past several years. This is attributed principally to the lining of the Grand Canal, but also due to the ongoing drought. In 1992, the depth to groundwater was approximately 71 feet below ground surface (bgs) adjacent to the canal and approximately 100 feet bgs approximately 650 feet south of the canal. By 2002, the mound had dissipated and the depth to groundwater was approximately 128 feet bgs. Prior to lining the canal, the groundwater flow direction varied from the south to the southeast beneath the Site at a gradient of approximately 0.02-0.04. After lining the canal, groundwater flowed to the south beneath the Site at a gradient of approximately 0.001 to .002 as of June 2003. Depth to water in the area as of January 2004 was between 128 feet and 138 feet bgs. Groundwater levels are currently at the same depths as in January 2004.

Contacts:

Name	Phone/Fax	E-mail
Kevin Snyder, ADEQ Project Manager	(602) 771-4186*/ (602) 771-4246 fax	kcs@azdeq.gov

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

Information Repository:

Interested parties can review select Site documents at the [Burton Barr Central Library](#) (Arizona Room) located at 1221 N. Central Avenue in Phoenix (602) 262-4636.

The complete official Site file can be reviewed at the ADEQ Main Office located at 1110 W. Washington Street, in 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.