

**NOTICE OF PUBLIC INFORMATION  
DEPARTMENT OF ENVIRONMENTAL QUALITY**

**2014 WATER QUALITY ASSURANCE REVOLVING FUND REGISTRY**

Pursuant to Arizona Revised Statute (A.R.S.) § 49-287.01(E), the Arizona Department of Environmental Quality (ADEQ) is providing this annual report of the location, remedial status and score of the sites on the Water Quality Assurance Revolving Fund (WQARF) Registry as of September 1, 2014. The Registry includes those sites within the state that may pose risk to public health, welfare or the environment from the release of hazardous substances and for which there is current or planned investigation and cleanup. There are 33 sites on the WQARF Registry:

21 in Maricopa County,  
7 in Pima County,  
2 in Gila County,  
1 in Graham County,  
1 in La Paz County, and  
1 in Yuma County.

Sites on the Registry are scored based in part upon the type of contamination present, the location of the contamination and the number of people that may be affected. The maximum score a site may receive is 120. Scores are used to help determine relative risk from the site and do not necessarily mean that there is direct exposure of contaminants to humans or the environment. Whether the site is currently being remediated or is being investigated, ADEQ takes steps to identify the contamination and to prevent exposure.

The Registry and additional information regarding these sites is available on the ADEQ web site at <http://www.azdeq.gov/environ/waste/sps/index.html>. With 48-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 West Washington Street in Phoenix. Please contact (602) 771-4380 to schedule an appointment to review these documents.

**Note:** As an aside, there are ten (10) active National Priority List (NPL) sites, three (3) delisted NPL sites, and one (1) Superfund alternative site in Arizona, which all are federal Superfund cleanup sites. There are also eight (8) Department of Defense (DoD) cleanup sites in Arizona with an additional 206 formerly used defense sites that have been or will be investigated. Information about these sites is available at: <http://www.azdeq.gov/environ/waste/sps/federal.html>.

**7th Avenue and Bethany Home Road** - This site was placed on the WQARF Registry on August 25, 2004 and has a score of 29. The site is located in Phoenix and is bounded to the north by Rose Lane, to the south by Bethany Home Road, to the east by 5th Avenue, and to the west by 8th Avenue, and includes the 2.6-acre former shopping center east of 7th Avenue that housed a dry cleaning facility, as well as a former dry cleaner west of 7th Avenue. Contaminants of concern at the site include tetrachloroethene (PCE), trichloroethene (TCE) and vinyl chloride.

ADEQ initiated an Early Response Action (ERA) evaluation of the 2.6-acre site in October 2004 to characterize the source area of PCE-contaminated soil below the site. A Soil Vapor Extraction (SVE) system operated from June 2005 through January 2006. Confirmation soil samples confirmed successful remediation to levels below ADEQ Soil Remediation Levels (SRLs) and Groundwater Protection Levels (GPLs).

In 2008, a site investigation of an additional dry cleaner in the area indicated that PCE had been released to the soil and groundwater beneath the site. Concentrations in soil at the property did not warrant further remediation however, groundwater beneath the site contained PCE concentrations between 8.0 and 24 parts per billion (ppb), above the Aquifer Water Quality Standard (AWQS) of 5 ppb. TCE and vinyl chloride also were present above their respective AWQS.

In January 2012, a sample from a Salt River Project (SRP) irrigation well sample, located approximately 0.5 miles north of the site, detected PCE at the AWQS of 5 ppb for the first time. ADEQ completed the final Remedial Investigation (RI) report in April 2011, the Feasibility Study (FS) work plan in May 2011 and the FS was completed in November 2012. The FS recommended enhanced reductive de-chlorination as the remedy for the site. An additional ERA was initiated and a pilot test for enhanced reductive de-chlorination began in March 2013. The pilot test was completed in March 2014 and results indicate reductive de-chlorination is a feasible remedy at the site. A Community Advisory Board (CAB) has been established for the site, merged with the Central and Camelback CAB in 2013 and meets on a regular basis.

**7th Street and Arizona Avenue** - This site was placed on the WQARF Registry in April 2000 and has a score of 40. The site is located in downtown Tucson, and is bounded approximately by Speedway Boulevard to the north, 8th Street and the railroad to the south, 4<sup>th</sup> Avenue to the east and Ash Avenue to the west. Contaminants of concern at the site include PCE, TCE, and cis-1,2-dichloroethene (cis-1,2-DCE).

ADEQ operated a SVE system from June 2006 to July 2009 as an ERA for the site. More than 700 pounds of volatile organic compounds (VOCs) were removed by the SVE system prior to the system being decommissioned in July 2009. Groundwater and soil vapor samples were collected in October and November 2011 and May 2012. Three (3) additional groundwater monitor wells, installed in September 2012, verified that the regional aquifer has not been impacted. ADEQ completed the final RI/FS in 2014 and the draft Proposed Remedial Action Plan (PRAP) in 2014. The Final PRAP and Record of Decision (ROD) are expected in fiscal year 2015. A CAB has been established for the site, merged with the Park-Euclid CAB in 2014 and meets on a regular basis.

**Camelback and 16th Street** - This site was placed on the WQARF Registry in April 1999 and has a score of 23. The site is located in Phoenix and is bounded approximately by Camelback Road to the north, Highland Avenue to the south, 17th Street to the east, and 15th Street to the west. Contaminants of concern at the site include PCE, 1, 2-dichloropropane and 1, 2-dichloroethane (1, 2-DCA).

Based on the results of an ERA evaluation conducted in 2003, ADEQ determined that SVE was not a feasible remedy for the site. Due to a lack of funding, site activities were suspended from 2008-2012. In the spring of 2013, groundwater monitoring activities were resumed. Two (2) additional wells were installed to complete characterization of the site and the draft RI report was completed in June 2014.

**20th Street and Factor Avenue** - This site was placed on the WQARF Registry in March 2000 and has a score of 31. The site is located in Yuma, approximately 0.50 miles south of 16th Street and approximately 0.75 miles east of 4th Avenue. Contaminants of concern at the site include PCE, TCE, 1,1-dichloroethene (1,1-DCE), cyanide and di(2-ethylhexyl) phthalate.

In 2002, ADEQ conducted a soil removal action and cleaned out sumps and septic tanks at an active facility as part of an ERA. A soil vapor investigation was initiated in 2008. Vapor monitoring is ongoing. During February 2013, three (3) additional monitor wells were installed to complete the definition of the groundwater plume downgradient of the site. Groundwater monitoring activities are ongoing and no drinking water wells have been impacted. In February 2014, ADEQ completed the installation of a permanent asphalt-based engineered cap. The cap was placed over the cyanide impacted soils still remaining at a depth below one (1) foot at the site. The draft RI report was completed in June 2014. A CAB has been established for this site and meets on a regular basis.

**56th Street & Earll Drive** - This site was placed on the WQARF Registry on June 2, 2004 and has a score of 40. The site is located in Phoenix near 56th Street and Earll Drive. The plume is bounded by Earll Drive to the north, Roosevelt Street to the south, 56th Street to the east, and 26th Street to the west. The contaminant of concern at the site is TCE.

The site originally was investigated as part of the Motorola 52nd Street NPL site. However, groundwater data from both sites indicate that the two TCE groundwater contaminant plumes are separate and distinct plumes and it was disassociated from the larger Motorola 52nd Street NPL site. ADEQ is working cooperatively with a party potentially responsible for the contamination to remediate the site. A pump and treat groundwater system was constructed and started operation in November 2013 as part of an ERA. ADEQ and the working party are negotiating Consent Orders for operation and maintenance of the remedial system and for the completion of the RI/FS reports. A CAB has been established for this site and meets on a regular basis.

**Broadway-Pantano** - This site was placed on the WQARF Registry in December 1998 and has a score of 57. The site is located in the east-central part of Tucson and is bounded approximately by Speedway Boulevard to the north, Calle Madero to the south, Pantano Wash to the east, and Craycroft Road to the west. Contaminants of concern in groundwater include PCE, TCE and vinyl chloride.

A groundwater containment system was installed in 2003 to prevent further westward migration of contaminated groundwater. This system was shut down in October 2012 because incoming groundwater contaminant concentrations did not warrant continued operation; however, the system is being maintained in a state of readiness in case site conditions change.

The sources of the groundwater contamination are the former Broadway North and South Landfills. A SVE system was installed at the Broadway North Landfill in 2000 to remove and treat contaminated VOC landfill gases contributing to the groundwater contamination. This system operated until 2002 and removed more than 5,000 pounds of VOCs. The groundwater RI report was finalized in June 2012. In 2014, the draft landfill RI and proposed landfill Remedial Objectives (RO) reports were issued for public comment. The landfill RI will be finalized in fiscal year 2015. A CAB has been established for this site and meets on a regular basis.

**Central Avenue and Camelback Road** - This site was placed on the WQARF Registry in June 2000 and has a score of 32. The boundaries of the site are approximately Georgia Avenue to the north, Mariposa Street to the south, 2nd Street to the east and 1st Avenue to the west. Contaminants of concern at the site include PCE, TCE and cis-1,2-DCE. Other contaminants present due to past releases from gasoline underground storage tanks in the area include benzene, toluene, ethylbenzene, total xylenes, methyl tertiary butyl ether (MTBE), and 1,2-DCA.

In January 2003, as part of an ERA ADEQ completed construction of a groundwater treatment system to remediate and control the migration of contaminated groundwater. The groundwater pump and treat system has been in operation since January 2003. In June 2004, ADEQ initiated an ERA evaluation of the Maroney's Drycleaner facility. Based on the results, an SVE was proposed for remediation of PCE contaminated soil beneath the site. The SVE system was installed in November 2007 and is currently in operation. The RI was initiated in 2007. Passive and active soil gas surveys were conducted in the vicinity of the former drycleaner's building. A SVE well was installed at the site, a pilot test was conducted and the new well was added to the system. A draft RI report was presented to the public for review and comment in May 2014. A CAB has been established for this site, merged with the 7th Avenue and Bethany Home Road CAB and meets on a regular basis.

**Cooper Road and Commerce Avenue** - The site was listed on the WQARF Registry on June 14, 2004 and has a score of 33. The site is located in Gilbert near Guadalupe Road and Cooper Road, and the plume is bounded by Encinas Street to the north, Neely Ranch Preserve to the south, Neely Street to the east, and Ocotillo Drive to the west. Contaminants of concern at the site in groundwater include PCE and TCE. Contaminants of concern in the soils at the site include PCE, arsenic, chromium, copper, total petroleum hydrocarbons, mercury, and lead.

PCE and TCE have been detected in the groundwater at the site. In 2001, groundwater samples collected from a Town of Gilbert monitoring well detected PCE concentrations above the AWQS. A Town of Gilbert public supply well is located nearby. Installation of off-site monitor wells began in 2003 and quarterly groundwater monitoring has been conducted at the site since March 2005. ADEQ began an ERA evaluation in March 2006. Construction of the SVE/air sparging (AS) and groundwater pump and treat remediation system was completed in July 2008 and start-up of the SVE system occurred on December 22, 2008. Start-up of the AS component occurred in May 2009. Additional SVE wells were added in 2011 and 2012. SRP and ADEQ finalized an agreement to discharge treated groundwater to the lateral south of the site in June 2010. The groundwater pump and treat system began continuous operations on August 25, 2010. The draft RI report was completed in June 2014. A CAB has been established for the site and meets on a regular basis.

**East Central Phoenix (ECP) 24th Street and Grand Canal** - This site was placed on the WQARF Registry in May 2000 and has a score of 29. The site is located in Phoenix, and the current site boundary is a 400-foot diameter circle centered on the SRP well 16E-6.8N. The contaminant of concern at the site is PCE.

The RI began in 2007. In July 2008, a groundwater monitoring well was drilled approximately 800 feet north of the WQARF site. The well had a depth to water measurement of 86 feet and a PCE concentration of 300 ppb. In fiscal year (FY) 14, five (5) groundwater monitor wells were installed and 68 groundwater samples were collected. Additional groundwater monitor wells are to be drilled in FY15. Following completion of contaminant plume characterization, the RI report will be prepared. A CAB has been established for this site and meets on a regular basis.

**ECP 32nd Street and Indian School** - This site was placed on the WQARF Registry in May 2000 and has a score of 29. The site has two (2) separate areas of groundwater contamination. The plumes are bounded by Monterosa Street to the north, Clarendon Avenue to the south, 32nd Place to the east and 30th Street to the west. The contaminant of concern at the site is PCE.

ADEQ initiated an ERA consisting of a SVE system in December 2004 and approximately 3,100 pounds of PCE had been removed through December 2006. The SVE equipment was dismantled at this site for use at another WQARF site.

ADEQ conducted a soil vapor investigation along 31st Street and Fairmont Avenue to help characterize contaminants in the shallow subsurface soil. Short-term SVE pilot tests were conducted at Maroney's Cleaners, the former Viking Cleaners facility and near the corner of 31st Street and Fairmont Avenue. In 2014, ADEQ completed construction of SVE remediation systems near the Maroney's Cleaners site and behind the former Viking's Cleaners facility near the corner of 31st Street and Fairmont Avenue.

A vapor intrusion indoor air assessment study took place during the summer of 2013. The indoor air of residences in the study area was sampled. A second sampling event occurred in February 2014 to compare data on a seasonal level. This assessment focused on residences (specifically single-family homes and ground-floor residences of multi-unit buildings) and schools. Laboratory analyses indicated that the threat to residences was minimal and that no indoor mitigation systems were necessary. A CAB has been established for this site and meets on a regular basis.

**ECP 38th Street and Indian School Road** - This site was placed on the WQARF Registry in September 1998 and has a score of 25. The site is located in Phoenix, and the plume is bounded by Indian School Road to the north, Piccadilly Road to the south, 38th Street to the east and 36th Street to the west. The contaminant of concern at the site is PCE.

ADEQ conducted an ERA, which consisted of a SVE system to remediate the source of PCE in the soil and groundwater. The system was started in 1994, operated intermittently and was shut down in March 2003. In FY14, additional groundwater monitor wells were installed. A draft RI report was submitted in June 2014. A CAB has been established for this site and meets on a regular basis.

**ECP 40th Street and Indian School Road** - This site was placed on the WQARF Registry in September 1998 and has a score of 25. The site is located in Phoenix, and the plume is bounded by Devonshire Avenue to the north, Amelia Avenue to the south, 40th Street to the east and 38th Street to the west. Contaminants of concern at the site include PCE and TCE.

ADEQ conducted an ERA, which consisted of a SVE/AS to remediate the source of PCE in the soil and groundwater. The system was started in December and was shut down in June 2005. In FY14, additional groundwater monitor wells were installed. A draft RI report was submitted in June 2014. A CAB has been established for this site and meets on a regular basis.

**ECP 40th Street and Osborn** - This site was placed on the WQARF Registry in May 2000 and has a score of 30. The site is located in Phoenix, and the current site boundary is a 400-foot diameter circle centered on the SRP well 17.9E-7.5N. The contaminant of concern at the site is PCE.

In FY14, additional groundwater monitor wells were installed. A draft RI report was submitted in June 2014. A CAB has been established for this site and meets on a regular basis.

**ECP 48th Street and Indian School Rd.** - This site was placed on the WQARF Registry in March 1999 and has a score of 27. The site is located in Phoenix, and the plume is bounded by Devonshire Avenue to the north, Fairmont Avenue to the south, 48th Street to the east and 45th Place to the west. The contaminant of concern at the site is PCE.

ADEQ and SRP entered into an agreement to conduct a source control interim remedial action (IRA) in 2004. As part of the IRA, SRP constructed a SVE system to remediate the source of PCE in soil. SRP relinquished control of the SVE system to ADEQ in April 2012. ADEQ initiated a SVE ERA and construction of the new SVE system will be completed in 2015. Groundwater monitoring and soil gas monitoring activities are currently being conducted throughout the site.

A vapor intrusion indoor air assessment study took place during the summer of 2013. The indoor air of residences in the study area was sampled. Sampling took place in February 2014. Two events are necessary to evaluate data for seasonal fluctuations and for data validation. This assessment focused on residences (specifically single-family homes and ground-floor residences of multi-unit buildings) and schools. A CAB has been established for this site and meets on a regular basis.

**Estes Landfill** - This site was placed on the WQARF Registry in April 1998 and has a score of 50. The site is located in Phoenix, south of Sky Harbor Airport and is bounded approximately by the Salt River to the north, Magnolia Street to the south, State Route 153 to the east, and 40th Street to the west. Contaminants of concern at the site include vinyl chloride, cis-1,2-DCE, TCE in groundwater; lead, arsenic, and thallium in soil.

In January 2008, methane and VOC vapor samples were collected from the landfill. Groundwater is sampled twice a year. The RI/FS has been completed and ADEQ is updating the PRAP.

**Klondyke Tailings Project** - This site was placed on the WQARF Registry in September 1998 and has a score of 69. The site is located approximately two (2) miles north of the town of Klondyke in Section 6, Township 7 South, Range 20 East. The site boundaries are defined by the extent of the soil contamination above the residential SRL for lead of 400 milligrams per kilogram (mg/kg). The site boundary is irregular and includes the property containing the tailings piles and several surrounding properties. The current contaminants of concern in the soil include antimony, arsenic, cadmium, copper, lead, manganese, mercury, and zinc

Sampling to determine the extent of off-site soil contamination began in 2006. To date, approximately 2,500 soil samples have been collected from the site and adjacent properties. The limits of the 400 mg/kg residential soil remediation level for lead have been defined to extend approximately 0.50 miles from the site and impact nine (9) properties adjacent to the site.

ERA activities continue at the site. These activities have included geophysical surveys and minor repairs to the berms on the tailings piles. Aerial photography, topographic mapping, historic aerial photography analysis, floodplain delineation, and analysis of the 10-, 25-, 50- and 100-year floodplains, and a geomorphology study of Aravaipa and Laurel Creeks were done to evaluate possible remedies due to the site's location near these creeks. ADEQ selected gabion mattresses for erosion protection in October 2007. Erosion protection installation began in March 2008. In June 2008, erosion protection installation was completed on the upper tailings pile and the clean soil cap was seeded.

ADEQ, with the EPA's assistance, evaluated soil removal options on the residential properties located in the vicinity of the site. EPA collected additional samples in the immediate area surrounding five (5) residences in March 2010. In FY12, EPA initiated the planned removal of contaminated soils from three (3) properties. During June 2012, approximately 2,000 cubic yards of contaminated soil were removed from two of the properties. An additional 1,040 cubic yards of contaminated soil was removed for one of the original properties and the third property in October 2013. In 2014, the Final RI was completed. A CAB has been established for the site and meets on a regular basis.

**Los Reales Landfill** - This site was placed on the WQARF Registry in April 1999 and has a score of 32. The site is an active municipal sanitary landfill (approximately 283 acre waste footprint) located in southeast Tucson and has been in operation since 1967. Contaminants of concern at the site include PCE and TCE.

The City of Tucson has implemented a groundwater pump and treat system as required by a 1995 remedial action plan. A portion of the treated water is re-injected into the aquifer and a portion is used for dust control at the landfill. In FY13, the City submitted to ADEQ a PRAP modification of transitioning to “groundwater sampling only” based on continued plume stability (apparent natural attenuation).

**Miracle Mile Area** - This site was placed on the WQARF Registry in September 1998 and has a score of 62. The site is located in Tucson and is bounded approximately by Wetmore Road to the north, Prince Road to the south, Pomona Road to the east, and La Cholla Boulevard to the west. Contaminants of concern at the site include TCE and chromium.

The local water provider is operating an ADEQ-funded wellhead treatment system as an ERA to remove TCE. In fiscal year 2013, the final RI report was issued and the FS was initiated. A CAB has been established for this site and meets on a regular basis.

**Park-Euclid** - This site was placed on the WQARF Registry in April 1999 and has a score of 51. The site is in Tucson and is approximately bounded by 9th Street to the north, 14th Street to the south, Santa Rita Avenue to the east, and Park Avenue to the west. Contaminants of concern at the site include PCE, TCE and cis-1,2-DCE.

ADEQ negotiated an Agreement to Conduct Work with potentially responsible parties Mission Linen and Haskell Linen (Park-Euclid Working Group) in 2010. In November 2011, ADEQ completed the final RI and Remedial Objective (RO) reports. The Park-Euclid Working Group submitted a FS work plan in June 2013, has implemented the FS and expects completion of the report in fiscal year 2015. A CAB has been established for this site, merged with the 7th Street and Arizona Avenue CAB, and meets on a regular basis.

**Payson PCE** - This site was placed on the WQARF Registry in April 1998 and has a score of 63. The site is located in Payson and the plume is bounded approximately by Main Street to the north, Cedar Lane to the south, Beeline Highway (State Route 87) to the east, and McLane Road to the west. The contaminant of concern in the groundwater at the site is PCE.

Two (2) groundwater treatment systems have been constructed. An Interim Groundwater Treatment System (IGTS) was constructed to remediate the contamination in the source area. The IGTS operated from October 1998 to January 2003 and was shut down due to low levels of contamination in the source area. The IGTS was decommissioned in July 2013.

An Expanded Groundwater Treatment System (EGTS) began operation in October 1998 and continues to operate treating contaminated water and preventing the contamination plume from migrating further. Treated water from the EGTS is delivered to the Town of Payson drinking water system.

ADEQ completed the ROD in June 2007. Groundwater monitoring takes place twice per year. The Periodic Site Review was completed in November 2013. In December 2013, two (2) additional monitor wells were connected into the production well network of the EGTS and started pumping in January 2014 for additional remediation of contaminated groundwater. In May 2014, to enhance remedial efforts, a catalyzed hydrogen peroxide in-situ chemical oxidation (ISCO) pilot test was conducted.

**Pinal Creek** - This site was placed on the WQARF Registry in October 1998 and has a score of 97. The site is located in Gila County in and around the cities of Globe, Town of Miami, and the communities of Claypool and Wheatfields. The site includes the BHP Copper and Freeport McMoRan (formerly Phelps Dodge) Miami mining properties, and the drainages and underlying aquifers of Miami Wash, Bloody Tanks Wash, Russell Gulch, and Pinal Creek. The site also includes the entire floodplain of Pinal Creek from the Old Dominion Mine to the Salt River, plus those portions of the communities underlain by contaminated groundwater. Contaminants of concern in groundwater at the site include heavy metals such as aluminum, iron, manganese, copper, cobalt, nickel, zinc, cadmium, and other contaminants such as sulfate, acidity, and dissolved solids. Localized soil and stream sediment contamination are being investigated; contaminants of concern include arsenic, lead, copper, cadmium, manganese, nickel, and zinc.

The Pinal Creek Group (PCG), which previously consisted of BHP, Freeport McMoRan and Inspiration Copper, have been conducting remedial actions including source control since 1988 and have completed a RI, risk assessments, a FS, and a recommended remedial action plan. They also have conducted a well replacement program for contaminated private and public supply wells. The PCG has been conducting groundwater extraction and treatment from the alluvial and the regional aquifers since 1988. In 2010, the Pinal Creek Group petitioned the U.S. District Court to modify the membership of the PCG to Freeport McMoRan and Inspiration Copper. BHP Copper is no longer a part of the group. BHP still is responsible for management of their properties in accordance with the governing Consent Decree. Freeport McMoRan now solely manages the PCG, as well as remedial actions at their properties. The PCG remains responsible for the site-wide remedial actions. Source control, groundwater remediation, and groundwater monitoring continue. To speed up aquifer restoration, groundwater remedy optimization pilot tests have been conducted near the source area in Bloody Tanks Wash.

**Shannon Road/El Camino del Cerro** - The El Camino del Cerro WQARF site and Shannon Road-Rillito Creek WQARF site were administratively combined into one site, the Shannon Road/El Camino del Cerro WQARF site, in January 2005 based on sampling results showing there is a single plume. The El Camino del Cerro site was placed on the WQARF Registry in August 1998 and has a score of 71. The Shannon Road-Rillito Creek site was placed on the WQARF Registry in April 1999 and has a score of 53. Contaminants of concern in groundwater at the site include PCE, TCE, 1,1-DCE, vinyl chloride, and benzene. Contaminants that have been detected in groundwater at the site above Arizona regulatory levels include: PCE, TCE, 1,1-DCE, 1,1-DCA, and cis-1,2-DCE.

This combined site is located in northwest Tucson and is bounded approximately 0.25 miles north of Rillito Creek, El Camino del Cerro Road on the south, Meadowbrook Park on the east, the Santa Cruz River on the west. The site consists of industrial and residential properties, and a former landfill which occupies approximately twenty (20) acres in the southwest portion of the site.

The contaminant plume has impacted three (3) community wells which were removed from service. One (1) of these wells now has a wellhead treatment system removing VOCs to meet drinking water standards. The draft RI and RO reports were submitted in March and May 2014 respectively, for public comment. The final RI report is expected to be completed in FY15. A CAB has been established for the site and meets on a regular basis.

**Silverbell Jail Annex Landfill** - This site was placed on the WQARF Registry in April 1999 and has a score of 51. The site is located at 3200 North Silverbell Road in northwest Tucson. The site is bounded approximately by Sweetwater Drive on the north, Grant Road/Ironwood Hills Drive on the south, Interstate 10 on the east, and Silverbell Road on the west, and is comprised of approximately forty (40) acres. Contaminants of concern at the site include PCE, TCE, cis-1,2-DCE and vinyl chloride.

In 2001, the City of Tucson began operation of a full-scale SVE system to remove and treat contaminated VOC landfill gases contributing to the groundwater contamination. From December 2006 until 2008, the system operated intermittently to control methane migration. In April 2008, the system was shut down and the equipment was removed. The City of Tucson continues to conduct soil-gas rebound testing periodically.

In 2010, the City of Tucson proposed to install a pump-treat-inject system to address the central part of the site plume with the highest VOC concentrations. A concern at this site is the overlapping of the northern part of the Kinder Morgan Silvercrock Wash Release (SWR) site MTBE groundwater plume with the southern part of the Silverbell Landfill PCE groundwater plume. The City of Tucson has been preparing the Request for Proposal (RFP) for the proposed groundwater cleanup system, but this RFP will not address the MTBE from the SWR site. ADEQ, the City of Tucson and Kinder Morgan meet periodically to improve coordination regarding sampling and cleanup of the two sites. Throughout 2012 and 2013, City of Tucson began finalizing a conceptual design for the proposed groundwater pump and treat system. As part of this, additional groundwater modeling was performed to estimate when the contamination would reach the proposed groundwater treatment system. The disposition of the discharge water from the pump and treat containment system currently is being determined by the City of Tucson during system design. Final system design and implementation is planned for fiscal year 2015. The City continues to conduct groundwater and soil vapor (methane) monitoring according to the remedial action plan. [Note -ADEQ is addressing the SWR site through its Voluntary Remediation Program.]

**South Mesa** - This site was placed on the WQARF Registry in August 1998 and has a score of 31. The site is located in Mesa and Gilbert and is bounded approximately by 10th Avenue to the north, the railroad south of Baseline Road to the south, Stapley Road to the east, and the railroad west of Center Street to the west. The contaminant of concern at the site is PCE.

Two (2) remedial action projects at the site have significantly reduced the contamination by treating pumped groundwater and extracting vapors from the soil. ADEQ began an ERA in June 2004, to address the remaining subsurface contamination. A SVE well was installed and connected to the existing SVE system and the system began operations in September 2004. ADEQ shutdown the SVE system in November 2007 and removed it from the site in June 2008.

The RI, RO and FS reports have been completed. A PRAP is under review at ADEQ. A CAB has been established for this site and meets on a regular basis.

**Tyson Wash** - This site was placed on the WQARF Registry in December 1998 and has a score of 46. The site is located in the Town of Quartzsite and the contaminated groundwater plume is bounded by Sunset Street to the north, Oregon Avenue to the west, Main Street (Business I-10) to the south, and Central Boulevard (SR-95) to the east. The known groundwater contamination exists northwest of the intersection of State Highway 95 and Business Route I-10 in Quartzsite. Contaminants of concern at the site include PCE and TCE.

As part of an ERA, a groundwater treatment system was constructed in 2003 and is currently being operated to reduce contaminant concentrations in the aquifer and prevent migration of the plume to private drinking water wells. The RI and FS have been completed, the PRAP was completed in June 2008, and the ROD was completed in June 2009. The site is in the O&M phase.

An ISCO pilot test was installed in April 2013 for a period of six (6) weeks. The purpose of the pilot test was to inject a low concentration of a catalyzed hydrogen peroxide reagent, at a low injection rate, to decrease concentrations of PCE in the groundwater. Results indicate an initial 64 percent decrease of PCE concentrations. The ISCO pilot test operated until May 28, 2013 and was decommissioned and removed from the site on June 3, 2013. A full scale ISCO system was then placed in operation on June 5, 2014.

**Vulture Mill** - This site was placed on the WQARF Registry in April 1998, and has a score of 65. The site is located just east of U.S. Route 89/93 about one (1) mile northwest of the center of the Town of Wickenburg. The eastern boundary of the site is approximately 0.25 miles west of the Hassayampa River. Contaminants of concern at the site include lead and arsenic.

The ROD was signed in September 1999. ADEQ has implemented the remedy, which consists of excavation of contaminated soil, placement in a consolidation pile, installation of a clean soil cover, and planting of vegetation to control erosion. Presently, the site is used as pasture and inspected annually. The last inspection occurred in March 2014. Negotiations with the owner to place a Declaration of Environmental Restriction on the property continues.

**West Central Phoenix (WCP) - East Grand Avenue** - This site was placed on the WQARF Registry in April 1998 and has a score of 31. The site is located in Phoenix and is bounded approximately by Whitton Avenue to the north, Osborn Road to the south, 29th Avenue to the east, and 30th Avenue to the west.

Field investigative activities were completed in December 2001 and the RI report has been completed. In 2004, a working party constructed and operated a SVE system at the former Van Waters & Rogers facility. The working party is in the process of completing the FS. A CAB has been established for this site.

**WCP North Canal Plume** - This site was placed on the WQARF Registry in June 1998 and has a score of 27. The site is located in Phoenix and the approximate boundaries of this site are Indian School Road on the north, West Flower Street on the south, 33rd Avenue on the east and 45th Avenue on the west. Contaminants of concern at the site include PCE, TCE and chromium.

The RI was initiated in February 2001 and ADEQ conducted an ERA evaluation in 2005. Due to lack of funding, site activities were suspended from 2008-2012. In 2013 and 2014, as part of the remedial investigation, groundwater monitoring and sampling was conducted. In 2014 a passive soil gas survey on 33rd Avenue was completed. Based on these data, additional groundwater, soil gas, and soil investigations are proposed to complete the RI investigation and prepare the draft RI report. A CAB has been established for this site.

**WCP North Plume** - This site was placed on the WQARF Registry in April 1998 and has a score of 55. The site is located in Phoenix and is bounded approximately by Turney Avenue to the north, Indian School Road to the south, 38th Avenue to the east, and 43rd Avenue to the west. Contaminants of concern at the site include PCE and TCE.

A SVE system was installed at the F&B facility as part of an ERA. The SVE system has been updated to improve operation. Further evaluations are being conducted to address groundwater contamination.

Through a working party agreement, a SVE system was operated at the Hill Brothers Chemical Company. The system removed more than 277 pounds of VOCs from the soils below the surface. A No Further Action (NFA) determination was issued for this facility following confirmation sampling and a public notice for review.

The RI and RO reports for this site are complete and the FS is underway. A CAB has been established for this site. A CAB has been established for this site.

**WCP West Grand Avenue** - This site was placed on the WQARF Registry in April 1998 and has a score of 22. The site is located in Phoenix and is bounded approximately by Osborn Road to the north, Earll Drive to the south, 33rd Avenue to the east, and 35th Avenue to the west. The contaminant of concern at the site is TCE.

The RI, RO and FS reports for this site are complete and a draft PRAP is being reviewed by ADEQ. A CAB has been established for this site.

**WCP West Osborn Complex** - This site was placed on the WQARF Registry in August 1998 and has a score of 52. The site is located in Phoenix and is bounded approximately by the Grand Canal to the north, Van Buren Street to the south, 34th Drive to the east, and 39th Drive to the west. Contaminants of concern at the site include TCE and PCE.

RI and RO reports have been completed. FS reports for the deep and shallow plumes for the project site have been approved. PRAPs were completed for the deep and shallow plumes and are being reviewed by ADEQ. A CAB has been established for this site.

**West Van Buren** - This site was placed on the WQARF Registry in April 1998 and has a score of 50. The site is located in Phoenix and is bounded approximately by Van Buren Street to the north, Buckeye Road to the south, Seventh Avenue to the east, and 83rd Avenue to the west. Between 7th Avenue and 27th Avenue, there is an extension of the plume south to Lower Buckeye Road. Contaminants of concern at the site include PCE, TCE, 1,1,1-trichloroethane (1,1-TCA), 1,1-DCA, 1,1-DCE, cis-1,2-DCE, and chromium.

Air Liquide USA, LLC and Air Liquide America Specialty Gases, LLC (Air Liquide) signed a Consent Order in 2007 to conduct investigative work on their property. Air Liquide performed a SVE pilot test in 2012 and determined that VOC levels were below remediation action levels. Air Liquide currently performs groundwater monitoring in accordance with their Consent Order.

ADEQ conducted an ERA from 1999 to 2003 at the former American Linen Supply Company (ALSCo) that consisted of SVE/AS and groundwater pump and treat remediation systems. The SVE system removed approximately 900 pounds of VOCs from the subsurface and the groundwater pump and treatment system removed approximately 24 pounds of VOCs from 118 million gallons of groundwater. ADEQ issued ALSCo a NFA determination for soil in 2008.

ChemResearch Company Incorporated (ChemResearch) excavated and disposed of contaminated soil in 1995. ChemResearch is currently under a Consent Order with the ADEQ Resource Conservation and Recovery Act (RCRA) program to perform groundwater monitoring and remediate soil beneath the western portion of their facility.

Dolphin Incorporated (Dolphin) operated SVE/AS systems from 1998 to 2002. In December 2002, Dolphin received authorization from ADEQ to shutdown the SVE/AS systems. Approximately 11,658 pounds of VOCs were removed from the subsurface. Dolphin satisfied the terms of their Consent Order and Consent Judgment with the ADEQ RCRA program in 2006.

Maricopa County Materials Management (MCMM) operated a SVE system at their facility in 1997. Approximately 145 pounds of VOCs were removed from the subsurface. MCMM settled with ADEQ in 2001.

Union Pacific Railroad Company settled with ADEQ in 2001.

Penn Racquet Sports Incorporated settled with ADEQ under a Consent Decree in 2013.

Prudential Overall Supply (Prudential) entered into a Consent Order to investigate soil and groundwater contamination at their facility in 2008. Prudential currently operates a SVE system and performs groundwater monitoring.

Reynolds Metals Company (Reynolds) operated a SVE system periodically from 1989 to 1991. Approximately 3,100 tons of contaminated soil was excavated and hauled from the facility. ADEQ issued Reynolds an NFA for soil for 14 release areas in 2000.

Van Waters and Rogers Incorporated (VW&R) installed and periodically operated a SVE system from 1992 to 1998. Up to 870 pounds of VOCs were removed from the subsurface. ADEQ issued VW&R an NFA determination for soil in 2002.

Roosevelt Irrigation District (RID) submitted an ERA plan that consisted of integrated pumping and treatment of the ten (10) most highly contaminated RID wells. ADEQ conditionally approved the ERA plan on June 24, 2010. RID submitted a modified ERA plan in July 2012 that was conditionally approved by ADEQ on February 1, 2013. RID installed liquid-phase granular activated carbon wellhead treatment systems on four (4) of RID's wells within the West Van Buren Area plume.

ADEQ finalized the RI and RO report for WVBA in August 2012. RID and the West Van Buren Working Group (WVBWG), under working agreements with ADEQ, submitted separate FS work plans in July 2013 and draft FS reports in July 2014. In 2014, three (3) additional monitoring wells were installed by ADEQ to delineate the extent of the contamination and to investigate potential source areas. A CAB has been formed for this site and meets on a regular basis.

**Western Avenue Plume** - This site was placed on the WQARF Registry in December 1998 and has a score of 51. The site is located in Avondale and Goodyear and is bounded approximately by San Xavier Boulevard to the north, State Route 85 to the south, 3rd Street to the east and Phoenix Goodyear Airport to the west. The contaminant of concern at the site is PCE.

The final RI report and FS were completed in May 2009 and November 2013, respectively. ADEQ is currently preparing the PRAP for the site with a target completion date of January 2015. The City of Goodyear Municipal Well No. 1 (COG-1) is located in the Western Avenue site. Historically, PCE has not been detected at this well above the AWQS of 5 ppb. Groundwater monitoring wells at the site are currently being sampled quarterly, along with COG-1. A Community Advisory Group (CAG) has been established for this site in conjunction with the Phoenix Goodyear Airport (PGA) Superfund site.