

Phoenix-Goodyear Airport North EPA National Priorities List (NPL) Site

Boundaries:

The Phoenix-Goodyear Airport (PGA) Superfund Site (Site) is located approximately 17 miles west of Phoenix in Goodyear, Arizona. PGA is divided into a northern portion called [PGA North](#) (PGAN) and a southern portion called PGA South (PGAS). Contamination from these two areas is not contiguous. PGAN consists of the [Unidynamics](#) property and groundwater contamination originating from the property. The plume boundary varies and may extend beyond the PGAN boundary, but remains part of the Site in its entirety.

Site Status Update:

[Crane Co.](#), the corporate successor to Unidynamics, continues to perform activities as outlined in the [consent decree](#) between the [U.S. Environmental Protection Agency](#) (EPA) and Crane Co. dated March 2006. Crane Co. is performing activities that are conducted during the course of a [remedial investigation/feasibility study](#) (RI/FS).



Main Treatment System

Several new wells were installed in 2010 including 17 [monitoring wells](#), two [piezometers](#), three [injection wells](#) and one extraction well. The northeast treatment system was completed and brought on line on September 27, 2010 which consists of one extraction well (EA-07) and three injection wells (IA-11, IA-12 and IA-13).

The Main Treatment System (MTS) Expansion was completed and brought on line on June 7, 2010 which consisted of adding an additional air stripper to the MTS, connecting all associated pipelines, and modifying well MW-29 to an extraction well. The Source Areas, Soil and Facility Structures Investigation was also completed in 2010 which characterized potential source areas at PGAN to determine if soil, soil vapor or groundwater sources remained at the facility.

A Five-Year Review (FYR) was completed and signed by EPA and the Arizona Department of Environmental Quality (ADEQ) on September 29, 2010. The protectiveness statement for PGAN states: “The remedy at PGAN is not yet completely protective of human health and the environment. In Subunit A, the TCE plume is expanding to the northeast and the north. In the southeast, it is uncertain whether the Subunit A TCE plume is within the capture zones of MTS Subunit A extraction well system. Recent detections in the vicinity of MW-29 indicate an unknown potential migration route from Subunit A to subunit C. Two issues that may affect long term protectiveness have also been identified: the Soil Vapor Extraction (SVE) remedy for soil gas has had diminished recovery over the past five years; and all of the institutional controls have yet to be implemented.”

Community Involvement Activities:

A [community advisory group](#) (CAG) was formed in January 2001 in conjunction with [PGAS](#) and [Western Avenue WQARF](#) sites and meets on a regular basis. CAG members are selected from applications that are received. Meeting agendas and [minutes](#) for 2010 and 2011 can be viewed at the ADEQ Web site and the meetings are open to the public. EPA publishes [fact sheets](#) that are sent to the community involvement area regarding PGAN progress, and the [latest fact sheet](#) can be viewed on the ADEQ Web site.

Site History:

1963-1981: Unidynamics operated a research, design and manufacturing facility for ordnance and related equipment from 1963 to 1993. Several different chemicals, including [solvents](#) such as [trichloroethene](#) (TCE), [acetone](#) and [methyl-ethyl-ketone](#), were used in manufacturing devices and were reportedly disposed of in [drywells](#) at PGAN. The [Arizona Department of Health Services](#) discovered the groundwater contamination in 1981.

1983: EPA added PGAN to the [National Priorities List](#) (NPL) in [September 8](#).

1984: EPA began an RI of the area now known as the [PGA](#) to characterize the Site, discover the extent of the contamination, and identify possible sources. From this study, the entire Site was divided at Yuma Road into a north and a south portion.

1990: In September, EPA issued an Administrative Order directing Unidynamics to proceed with soil and groundwater remediation as described in EPA's 1989 [Record of Decision](#) (ROD). The groundwater portion of the remediation program involves extracting the groundwater, removing the contaminants by [air stripping](#) with emissions control, and reinjecting the treated water into the same aquifer [upgradient](#) of the plume or discharging the treated water to the Roosevelt Irrigation Canal.



SVE System on UPI Site

1994: For treatment of soil contamination, an [SVE](#) system began operation and included a thermal oxidation unit equipped with an exhaust scrubber to reduce emissions.

1998: [Perchlorate](#) contamination was discovered and began to be included in the current groundwater monitoring regime.

2002-2003: The Phase II groundwater investigation conducted by EPA in 2002-2003, yielded valuable data; however, additional investigation was needed to further characterize the nature and extent of the groundwater contamination and the soils at the Unidynamics facility.



Well 33A Treatment System

2004-2006: EPA and ADEQ worked with Crane Co. to finalize a subsurface soil gas investigation to better understand the facility (no problems found); re-started the SVE system with carbon treatment to address soil gas contamination; continued to investigate the nature and extent of TCE and perchlorate contamination; and continued to study the effectiveness of treating perchlorate-contaminated groundwater at the City of Goodyear's wastewater treatment plant (due to contractual and capacity issues, Crane Co. ultimately decided to install an ion-exchange system to treat perchlorate rather than treating perchlorate-contaminated groundwater at the City's wastewater treatment plant).

2005: Early in the year, EPA and Crane Co. concluded negotiations and entered into a consent decree that commits Crane Co. to repay EPA for past expenses and directs Crane Co. to continue investigation and clean up of the Site.

2006: Crane Co installed nine monitor wells, one groundwater [extraction well](#) and one groundwater re-injection well.

2007: An extraction well (EA-06) and treatment system located at the [Goodyear Community Park](#) was installed in December to address expansion of the northeast portion of the plume.

2008: An extraction well (EA-05) and treatment system located on [Maricopa Flood Control District](#) lands north of I-10 near Litchfield Road was operational at the end of March. This extraction and treatment system was designed to further address the eastern migration of the contaminant plume.

2009: Demolition of the buildings at the Unidynamics facility began in March and was completed in July. All wells were installed per the approved work plan and installation of the next phase of wells began in summer 2009. Crane Co. also focused on an expansion of the MTS located on the Unidynamics site.

2010: The northeast treatment system expansion project was completed and brought on line in September. The Main Treatment System was expanded to include an additional air stripper and converted well MW-29 into an extraction well. The 2010 FYR was completed and signed by ADEQ and EPA in September. Two piezometers, seventeen monitoring wells, one extraction well and three injection wells were installed during the year.

Contaminants:

The current contaminants of concern at PGAN include [chlorinated solvents](#), mainly [trichloroethene](#) (TCE), and [perchlorate](#). TCE is present in the subsurface soils located within the Unidynamics property, as well as in the groundwater. Perchlorate was discovered in the groundwater in August 1998. Contaminants of concern at PGAN may change as new data become available.

Public Health Impact:

Potential health risks may exist for individuals who ingest the contaminated groundwater. The [City of Goodyear](#), [City of Avondale](#), [Litchfield Park Service Company](#) (LPSCO) and other entities regularly monitor their drinking water supply wells, as required by law.

Site Hydrogeology:

PGAN lies within the Basin and Range physiographic province, consisting of [alluvial](#) basins interspersed by mountain ranges. The alluvial deposits of the western Salt River Valley consist of the Upper Alluvial Unit (UAU), the Middle Fine-grained Unit, or Middle Alluvial Unit (MAU) and the Lower Conglomerate Unit, or Lower Alluvial Unit (LAU). The UAU is approximately divided into three subunits: Subunit A, Subunit B, and Subunit C. Subunit A contains the bulk of the groundwater contamination beneath this Site. Groundwater contained within Subunit C is pumped for use as drinking water and for agricultural purposes.

Groundwater flow direction within both aquifers is largely influenced by pumping as there are multiple domestic, municipal, irrigation, and [remediation](#) (extraction and injection) wells in the vicinity of PGAN.

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

**Call EPA's toll-free message line at (800) 231-3075.

Information Repository:

Interested parties can review select Site documents at the [Sam Garcia Western Avenue Library](#) located at 495 E. Western Avenue in Avondale, (623) 333-2665.

Site files are also located 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.

The complete official Site file can be reviewed at the EPA Region IX, [Records Center](#), Mail Stop SFD-7C, 95 Hawthorne Street, Room 403, San Francisco, CA 94105, (415) 536-2000.