

South Indian Bend Wash

EPA National Priority List (NPL) Site

Boundaries:

[South Indian Bend Wash \(SIBW\) Site](#) (Site) represents the southern portion of the Indian Bend Wash (IBW) Superfund Site, and encompasses approximately four square miles in Tempe, Arizona. The Site is bounded by Apache Boulevard on the south, Rural/Scottsdale Road on the west, Price Road on the east, and Curry Road on the north. The plume boundary varies and may extend beyond the Site boundary, but remains part of the Superfund site in its entirety.

Site Status Update:

The [U.S. Environmental Protection Agency](#) (EPA) negotiated settlement agreements with the remaining [potentially responsible parties](#) (PRPs) associated with the central and eastern groundwater contamination plumes in SIBW in 2007. The entire site is a Superfund lead site with a monitored natural attenuation remedy.

The SIBW monitoring wells are sampled semi-annually by EPA and the Arizona Department of Environmental Quality (ADEQ). As of 2010, the groundwater remedy is resulting in contaminant concentrations which are mainly below the [maximum contaminant level](#) (MCL) of 5.0 parts per billion, with only one or two wells indicating contaminant concentrations nominally above the MCL. The groundwater remedy is expected to result in contaminant concentrations below the MCL in five to ten years across the Western, Central and Eastern groundwater plumes.



Inside one of the groundwater treatment facilities.

The Five Year Review (FYR) for the SIBW started in 2010 and will be completed by Fall 2011. A [Fact Sheet](#) was mailed to the community announcing the start of the FYR in November 2010.

Community Involvement Activities:

A construction completion ceremony and open house was held in December 2006. A fact sheet was mailed to the Site mailing list, in conjunction with the North Indian Bend Wash Site, announcing the start of the FYR and solicitation for interviews.

Site History:

1981-1983: SIBW was initially part of the IBW Superfund Site that was placed on EPA's [National Priorities List \(NPL\)](#) on [September 8, 1983](#) after the [City of Phoenix](#) detected [volatile organic compounds](#) (VOCs) in municipal wells in the Scottsdale/Tempe area in 1981.

1987-1983: The EPA began a [remedial investigation](#) (RI) of the IBW Site in 1983, and at the end of 1987, informally split the IBW into two study areas: the [Indian Bend Wash North](#) (NIBW) and SIBW.

1993: In September, the EPA issued a [Record of Decision](#) (ROD) for the cleanup of VOCs in soil at eight industrial facilities. This ROD required a "plug-in" presumptive remedy involving the use of [soil vapor extraction](#) (SVE) systems. Each sub-site collected [soil vapor](#) data and followed the ROD's guidelines to determine if an SVE system was necessary.

The EPA and ADEQ have completed technical reviews of the focused RI plug-in assessments and determined that the following six sub-sites (Cerprobe Corp., former Service and Sales, former Eldon Drapery, former Desert Sportswear, former Circuit Express and former Allstate) do not meet or exceed the plug-in criteria as described in the ROD.

1998: In September, the EPA signed a ROD for the cleanup of VOCs in the groundwater [operable unit](#) at this Site. The selected remedy required MNA for the central and eastern portions of the plume, and a groundwater extraction and treatment system for the western portion of the plume.

1999-2000: The EPA entered into negotiations with six [Primary Responsible Parties](#) (PRPs) in 1999 and executed an [Administrative Order on Consent](#) (AOC) with only one of the PRPs ([IMC Magnetics](#)) on September 27, 2000. This AOC required IMC Magnetics to design the MNA remedy for the central and eastern plumes. This work involved the installation of groundwater monitor wells and long-term monitoring of plume behavior and VOC degradation.

The western plume remedy is being addressed by EPA as a fund-lead action. The DCE Circuits Site and the [APS Ocotillo Generating Station](#) are thought to be contributors to the SIBW western groundwater contaminant plume. EPA and ADEQ have completed technical reviews of the focused RI plug-in assessments, and have determined that the following six sub-sites (Cerprobe Corp., former Service and Sales, Former Eldon Drapery, former Desert Sportswear, former Circuit Express and former Allstate) do not meet or exceed the plug-in criteria as described in the 1993 ROD.

2003: During February, EPA and ADEQ agreed that the former landfills along the banks of the Salt River do not pose a threat significant enough to continue to be listed as part of the Site. As a result, EPA published a notice of intent to delete (NOID) the landfills from the NPL for public comment. Only one positive comment was received, and the final Notice of Deletion (NOD) was sent by the EPA for filing in the Federal Register on [May 1, 2003](#).

An Amended Record of Decision (AROD) was completed which changed the remedy associated with the groundwater cleanup of the Western Plume on October 16, 2003. The remedy was originally prescribed as groundwater [pump and treat](#). The ROD amendment (AROD) now prescribes MNA as the remedy. This AROD now makes the remedy for all three groundwater plumes in the SIBW area MNA.

2004: In December 2004, EPA conducted a removal action at DCE Circuits. A [drywell](#) which received hazardous waste in the 1980s was removed by soil [boring](#). Several truck roll-off bins of soils were disposed as solid waste and several drums of waste were disposed as hazardous waste.

2005: Subsequent to the removal action at DCE Circuits, soil vapor samples were collected during 2005. The samples indicated levels of soil vapor which required remediation. A mobile SVE system was installed and operated, and samples were again collected. The analyses of these samples will indicate if further remediation is necessary. EPA conducted a “plug-in” determination for soils at the Unitog Sub-site in September. EPA determined the Unitog soils do not meet the plug-in determination criteria and therefore can be considered for a close out.

2006: On December 6, EPA announced that all physical construction of cleanup systems was [complete](#). Soil cleanup was expected to be complete in the next five years and groundwater cleanup an additional 30 years.

2007: In December 2007 settlements were announced with eight PRPs: Circuit Express, Inc.; IMC Magnetics; Prestige Cleaners, Inc.; Unitog Rental Services, Inc.; Janstar Development, Inc.; K and S Interconnect, Inc.; Service and Sales, Inc.; and Sherman Leibovitz.

2008: No further activity occurred this year. MNA continued and the wells were sampled on a quarterly basis by EPA.

2009: MNA continued and the wells were sampled on a quarterly basis by EPA.

2010: An additional monitoring well was installed at the southeast boundary of the Central plume during the summer of 2010 to assist in monitoring the remedy. The FYR process began for this Site with site inspections and interviews of community members and stakeholders.

Contaminants:

The current contaminants of concern in groundwater include VOCs. The current contaminants of concern in soil include VOCs, [cyanides](#), acids, and heavy metals ([chromium](#) and [lead](#)). Contaminants of concern at the Site may change as new data becomes available.

Public Health Impact:

All drinking water supply wells within the Site boundaries are inactive. Groundwater in the area is used for industrial purposes only. Drinking water is served by the [City of Tempe](#) municipal service from wells outside of the Site boundaries.

Site Hydrogeology:

At SIBW, groundwater occurs in three [aquifer](#) units: upper, middle, and lower [alluvial](#) units. The materials are primarily a thick, basin-fill sequence of alluvial sediments derived from surrounding mountains. Igneous rocks intrude in places, and crystalline bedrock exists in juxtaposition to the alluvial units as a result of block faulting.

The upper alluvial unit (UAU) is distributed across the entire IBW-South study area, and generally has a uniform thickness. The UAU typically is found near or at the ground surface and extends to approximately 110 to 170 feet below ground surface (bgs). The estimated transmissivity values varied widely from a low of 1,900 square feet per day (ft²/day) to a high of 73,000 ft²/day. Groundwater flow directions in the UAU are south to southwest during non-river flow conditions in the Salt River. These flow directions shift to south and southeast during river flow conditions in the Salt River when recharge influences groundwater flow directions. Groundwater flow through the UAU originates mainly from Salt River recharge (during flow events) and lateral inflow moves vertically downward, eventually entering the middle alluvial unit (MAU).

The MAU lies below the UAU and located approximately 170 to 200 feet below ground surface, and consists primarily of clay and sandy silt with significant interbedded layers of sand and gravel mixtures. These coarser-grained interbedded layers generally represent the zones with higher hydraulic conductivity in the MAU. Weak to strong calcium carbonate cementation is also present in the MAU. The groundwater flow direction in MAU Subunit B is generally west to east, but insufficient data exist to fully characterize the flow direction. The groundwater flow direction in MAU Subunit C varies from due north to east, with northeast appearing to be the predominant flow direction.

The lower alluvial unit (LAU) underlies the MAU and usually encountered at 500 feet bgs. Observations of the LAU indicate that the composition of the LAU is a conglomerate, dominated by weakly cemented gravel, sand, silt, and rock fragments. Limited data exist to estimate groundwater flow directions in the LAU. The general flow direction is to the east or northeast, similar to the MAU.

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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 [Tempe Historical Museum](#) located at 809 E. Southern Avenue in Tempe, (480) 350-5100 (ask for Museum Curator).

Site files can also be viewed at the ADEQ Main Office located at 1110 W. Washington Street in Phoenix. Once all documents requested have been collected, someone will contact you 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, Arizona. Please contact (602) 771-4380 or (800) 234-5677 to schedule an appointment with 24-hour notice to review these documents.

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.