



COMMUNITY INVOLVEMENT PLAN



West Central Phoenix WATER QUALITY ASSURANCE REVOLVING FUND (WQARF) SITES PHOENIX, ARIZONA

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CHAPTER 1 – Introduction

1.0 Introduction

The Arizona Department of Environmental Quality (ADEQ) is committed to involving citizens in the *remediation (cleanup)*¹ of contaminated sites in Arizona. This document is unique because it addresses five of these sites which are collectively known as the West Central Phoenix (WCP) Water Quality Assurance Revolving Fund (WQARF) Area. These sites are:

- (1) East Grand Avenue (EGA)
- (2) West Grand Avenue (WGA)
- (3) North Plume (NP)
- (4) North Canal Plume (NCP)
- (5) West Osborn Complex (WOC)

Since these sites are in close proximity to one another and share the same general community, one overall Community Involvement Plan (CIP) can most effectively describe ADEQ's role and public participation opportunities.

This CIP describes the community involvement activities that will be implemented to ensure that residents, businesses and other interested parties within the sites' Community Involvement Area (CIA) receive current accurate information about the remediation activities, and have opportunities to participate in the decision-making processes related to the cleanup and final remedies at the sites.

This CIP outlines the open, two-way communication between community members, ADEQ community involvement and technical staff by providing opportunities for the public to provide input on issues and concerns related to the sites. The CIP also describes the establishment and activities of the Community Advisory Board (CAB). The objectives of this CIP are to:

- keep area residents, businesses and other interested parties informed about the progress of project activities by providing timely, accurate information;
- ensure open, two-way communication between area residents and ADEQ community involvement and technical staff by providing opportunities for the public to provide input on issues and concerns related to the sites; and,
- describe the establishment and activities of the WCP WQARF sites CAB.

¹ Italicized terms can be found in the glossary in Appendix J.

1.1 Overview of the Community Involvement Plan

This CIP is divided into five chapters:

1. Introduction – An overview of the WQARF program and CIP.
2. Project Background – A WCP site description, overview of each site history and investigation conducted to date, public health and environmental impacts, and remedy selection.
3. Community Profile – A profile of the community around the WCP sites and key issues related to the project.
4. Community Involvement – A description of previous and planned community involvement activities as required by A.R.S. and A.A.C., and communication methods.
5. Community-Specific Considerations - This chapter documents all site specific community involvement activities and describes any additional community involvement activities that are deemed appropriate.

The appendices of this document include: Community Involvement Area (Appendix A), Site Boundary Maps (Appendix B), Demographic Summary and Graphs (Appendix C), Community and Neighborhood Organizations (Appendix D), Community Schools (Appendix E), *Information Repository* Locations (Appendix F), Local Government Officials (Appendix G), Media Outlets (Appendix H), ADEQ Contacts (Appendix I), and Glossary of Terms and Acronyms (Appendix J); Site Fact Sheets (Appendix K).

The CIP will be reviewed regularly, as required by Arizona law in Arizona Administrative Code (A.A.C. R18-16-404), and revised as necessary. The ADEQ community involvement staff will review this plan with input from the CAB in response to changes in the project time line and evolving public concerns and information needs.

1.2 Information on the *Water Quality Assurance Revolving Fund* (WQARF)

Through the WQARF program, the Arizona ADEQ identifies, assesses, and cleans up soil and *groundwater* that is contaminated with *hazardous substances*.

WQARF was created by the Arizona Legislature under the Environmental Quality Act of 1986 to support environmental *cleanup* efforts in Arizona. Also known as "State Superfund," WQARF is administered by ADEQ to:

- monitor soil and groundwater contamination within WQARF Registry sites;
- perform emergency remedial actions (cleanups);

- conduct investigations and long-term remedial action programs. The WQARF program is funded with state monies, taxes, fees and funds recovered from parties who have been determined to be responsible for the contamination.

WQARF was amended in 1997 to include additional public notice and community involvement requirements which are discussed in Chapter 4. WQARF is established under both the Arizona Revised Statute (A.R.S. 49-282) and Arizona Administrative Code (R18-16-401 through R18-16-416).

The statutes applied to the site to date have resulted in the following activities:

- mailing fact sheets;
- publishing public notices;
- holding public meetings;
- establishing the *information repositories*;
- establishing an ADEQ spokesperson;
- preparing the *community involvement plan* (CIP);
- determining the *community involvement area* (CIA); and,
- establishing the *community advisory board* (CAB).

***ADEQ Remedial Projects Section
Mission Statement***

To safeguard public health, protect the environment and restore natural resources through investigation and remediation of soil and groundwater that is contaminated with hazardous substances.

ADEQ has established a Registry of sites in Arizona where groundwater and/or soil contamination is known to be present and is to be remediated under the state's WQARF program. Sites appearing on this Registry qualify for funds available from the state's WQARF program for investigation and/or cleanup of contamination.

Sites on the Registry are given a numeric score based in part upon the type of *contaminant(s)* present, the location of the contaminant(s), and the number of people that may be affected by the contaminant(s). The West Central Phoenix (WCP) sites were placed on the WQARF Registry in 1998 with eligibility and evaluation scores based in part upon the type of contaminants present, location of the contaminants, and number of people that may be affected. At that time, the sites were scored out of a possible score of 120 as follows: East Grand Avenue: 26; West Grand Avenue: 17; North Canal: 22; North *Plume*: 50; and West Osborn Complex: 47. In 2000, the sites were rescored as follows: East Grand Avenue: 31; West Grand Avenue: 22; North Canal: 27; and North *Plume*: 55; and West Osborn Complex: 52. Scores are used to help determine relative risk at the site and do not necessarily mean there is a direct risk to humans or the environment. Major factors leading to this site's score include the presence of *tetrachloroethene* (PCE), *trichloroethylene* (TCE) and arsenic in groundwater samples collected at levels which exceed the Arizona *Aquifer Water Quality Standard* (AWQS).

1.3 Purpose of a CIP

Under *Arizona Revised Statutes* (A.R.S.) §49-287.03(B) and §49-289.03 ADEQ is required to prepare a CIP before initiating or approving a work plan for the *remedial investigation* (RI) and *feasibility study* (FS) for a WQARF site. The CIP is updated regularly.

The purpose of a CIP is to provide a meaningful process for communication between ADEQ and the public. The CIP will accomplish this goal by:

- ensuring public access to project information;
- identifying opportunities for community members and other interested parties to participate in the decision-making process associated with the environmental investigation and *remediation* of the site;
- establishing a CAB;
- designating an ADEQ spokesperson; and,
- developing a plan for distributing project fact sheets to residents within the site's CIA.

1.4 Sources of Information for the CIP

During the drafting process, interviews were conducted with community members, CAB members, and other area stakeholders. The ADEQ Community Involvement Coordinator conducted the interviews by telephone during the summer of 2007. A summary of interview questions and responses is located in Section 3.2, the following questions were asked:

1. How familiar are you with the cleanup at the WCP WQARF sites?
2. What specific information about the WCP sites would you like to know?
3. What are your interests or concerns regarding the sites?
4. Are you familiar with the community advisory board for the sites?
5. Have you attended CAB meetings?
6. Are you aware of the information repositories for these sites?
7. Do you feel you have been kept adequately informed?
8. Do you have suggestions for getting other people in the community involved?
9. Do you know who to contact at ADEQ regarding these sites?
10. What is the best way for ADEQ to communicate with you about these sites in the future?
11. Has ADEQ been responsive at these sites and to your concerns?
12. In what capacity would you like to be involved with future activities?

Responses from these interviews were used to identify community issues and concerns and to select the appropriate communication methods outlined in this document. The background and history portions of this document were compiled from site reports and interviews with ADEQ technical staff. Demographic and community profile information was obtained from the City of Phoenix, Neighborhood Notification Office, and the U.S. Census Bureau.

CHAPTER 2 - Project Background

2.1 Site Descriptions

The WCP WQARF Area was split into the five sites listed below:

- The WCP East Grand Avenue Site's groundwater contamination plume is bounded approximately by the Grand Canal to the north, 27th Avenue to the east, Thomas Road to the south, and 35th Avenue to the west.
- The WCP West Grand Avenue Site's groundwater contamination plume is bounded approximately by W. Osborn Road to the north, 31st Avenue to the east, Thomas Road to the south and 35th Avenue to the west.
- The WCP North Canal Plume Site's groundwater contamination plume is bounded approximately by Indian School Road to the north, Grand Avenue to the east, W. Flower Street to the south, and 45th Avenue to the west.
- The WCP North Plume Site's groundwater contamination plume is bounded approximately by W. Highland Avenue to the north, 37th Avenue to the east, Indian School Road to the south and 44th Avenue to the west.
- The WCP West Osborn Complex Site's groundwater contamination 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.

Site maps outlining the known and probable extent of the groundwater contamination are found in Appendix B of this document.

2.2 Site Histories and Investigations

The WCP sites are subject to Arizona rules and statutes governing WQARF sites. A fact sheet detailing information on these sites may be found in Appendix K of this document.

In 1982, groundwater contaminated with TCE, a *chlorinated solvent*, was detected in four area municipal wells during routine sampling to ensure compliance with drinking water standards. Two wells with high concentrations of TCE were immediately shut down and monitoring of the other wells continued until 1989 when they were also removed from service. The initial discovery prompted the Arizona Department of Health Services, the City of Phoenix, and Salt River Project (SRP) to begin extensive groundwater sampling in the area. These studies verified the presence of hazardous substances above regulatory limits in both municipal and irrigation wells in the area. The contaminants discovered included primarily TCE and PCE, which is a *solvent* commonly used for dry cleaning and other industrial operations. Areas of affected soil were also discovered.

The WCP WQARF Area was originally defined as a 21-acre area in west Phoenix. Based on a 1984 survey of more than 400 businesses that may have stored, handled, or disposed of hazardous substances, it was determined that the contamination came from several sources. Over time, ADEQ identified potentially *responsible parties* (RPs) for the contamination and has made extensive efforts to work with them to investigate and begin cleanup of the sites.

In 1987, the site was placed on ADEQ's former "Priority List" of contaminated sites in Arizona. In 1997, the WQARF Registry replaced the Priority List, and in 1998 the five sites were listed on the Registry. More detailed maps are contained in Appendix B. Investigations and cleanups have occurred in various stages since the initial discovery in 1982 and will continue for several years.

The following sections address each of the five WCP Area sites individually. Newsletters in Appendix K contain in-depth information about the sites.

EAST GRAND AVENUE SITE



industrial/commercial area. The site

*Soil Vapor Extraction System at
VW&R Facility*

The WCP East Grand Avenue Site's groundwater contamination plume is bounded approximately by the Grand Canal to the north, 27th Avenue to the east, Thomas Road to the south, and 35th Avenue to the west.

These boundaries represent the estimated area of contamination that exceeds regulatory levels. The property associated with this site is the former Van Waters & Rogers, Inc. (VW&R) *facility* which is located at 2930 W. Osborn Road in Phoenix in a light and transportation parts.

VW&R, a chemical distribution firm, operated at the facility from 1957 to 1970. The company stored a variety of chemicals including acids, bases, solvents, pesticides, and herbicides which were packaged in smaller containers for customers' use. Two above-ground storage tanks and numerous drums were known to be located on the property.

In 1993, ADEQ identified TCE, PCE, *1,1-dichloroethylene* (1,1-DCE), and *1,1,1-trichloroethane* (TCA) in soil-gas samples at the VW&R facility. TCE, PCE, TCA, and pesticides were found in soil at different depths. This discovery led to a series of environmental investigations, part of which was conducted by VW&R's parent company, Univar, USA. The remedial investigation (RI) has been conducted in several phases since 1997 to determine the nature and extent of contamination at the WCP East Grand Avenue Site. ADEQ reached an agreement with Univar, USA to conduct the *Feasibility Study* (FS), continue groundwater monitoring, and conduct groundwater modeling.

Since March 2003, groundwater monitoring has been conducted by Univar. Also in 2003, Univar installed a *soil vapor extraction* (SVE) system at the former W&R facility to clean up the soils. The SVE system became operational in January 2004. In May 2004, ADEQ issued the Draft RI Report for the WCP East Grand Avenue Site for public comment to meet the requirements established under A.R.S. §49-287.03 and A.A.C. R18-16-406. Comments were received during the 30-day comment period.

In January 2006, ADEQ issued the Proposed *Remedial Objectives* (RO) Report for the WCP East Grand Avenue Site 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 June 2006. In addition, since comments were received on the Draft RI Report, a *responsiveness summary* was prepared and the Final RI Report for the site was also issued in July 2006. Univar will be conducting the FS to evaluate specific remedial measures and strategies required to meet the remedial objectives so that the groundwater can be remediated.

WEST GRAND AVENUE SITE

The WCP West Grand Avenue Site's groundwater contamination plume is bounded approximately by Osborn Road to the north, 31st Avenue to the east, Thomas Road to the south and 35th Avenue to the west. (See map in Appendix B.) A property associated with this site, the Layke, Inc. facility, is located at 3330 W. Osborn. Layke, Inc. has operated at the facility since 1967 manufacturing parts for aircraft, aerospace, electronic and other industries. The company used TCE as a degreasing agent from 1975 until 1983. In 1990, an underground storage tank with TCE contamination was excavated after it overflowed and contaminated soil and groundwater. In 1992, a *monitoring well* showed a TCE concentration of 420 parts per billion (ppb) in groundwater, which is above the *maximum contaminant level* (MCL) for TCE of 5.0 ppb. Additional sampling identified other contaminants of concern including PCE, 1,1-DCE, *1,1-dichloroethane* (1,1-DCA) and *vinyl chloride*. These may change as new data become available.

Layke operated an SVE system from March 1995 through June 1998 to remediate the contamination beneath the UST. Between 2001 and 2002, soil samples were collected by ADEQ in the area of the UST to determine the effectiveness of the SVE system in cleaning up the soils. The soil data indicated that the contamination had been effectively remediated by the SVE system. Based on this information, ADEQ granted a No Further Action (NFA) request in December 2002, pursuant to A.R.S. §49-287.01.

In February 2004, ADEQ issued the Draft RI Report for the WCP West Grand Avenue Site for public comment to meet the requirements established under A.R.S. §49-287.03 and A.A.C. R18-16-406. No comments were received during the 30-day comment period. Since no comments were received on the Draft RI Report, this report has been accepted as the Final RI Report for the site. In October 2005, ADEQ issued the Proposed RO report for the WCP West Grand Avenue Site for public comment to meet the requirements established under A.A.C. R18-16-406. No comments were received during the 30-day comment period. ADEQ has yet to issue the Final RO Report.



Underground Storage Tank at Layke

NORTH CANAL PLUME SITE

The WCP North Canal Plume Site's groundwater contamination plume is bounded approximately by Indian School Road to the north, Grand Avenue to the east, W. Flower Street to the south, and 45th Avenue to the west. (See map in Appendix B.) ADEQ has conducted investigations at a facility within the site at 3632 W. Clarendon, formerly operated as Osborn Products, Inc. The Osborn Products, Inc. facility operated from 1956 to 1984 at the West Clarendon property as a chrome-plating shop and machine shop. TCE was used for cleaning the parts. Waste solvents were disposed of in above-ground storage tanks and into *drywells* at the facility. In 1984, TCE and other chemicals were detected in soil samples from areas around the drywells. Two groundwater monitoring wells were installed in 1992, finding TCE concentrations from 19 ppb to 320 ppb, all above the MCL for TCE.

Since that time, various tests have occurred to further identify the extent and types of contamination. The RI was initiated in 2000. ADEQ continues the RI investigative activities by installing groundwater monitoring wells, as well as collecting soil and soil-gas samples. ADEQ also continues with the investigation of several facilities in the area to determine if they are also sources of the groundwater contamination. Currently, the contaminants of concern in groundwater include the chlorinated solvents PCE, TCE, 1,1-DCE, and chromium. Quarterly groundwater sampling and water level monitoring continues.

NORTH PLUME SITE

The WCP North Plume Site's groundwater contamination plume is bounded approximately by W. Highland Avenue to the north, 37th Avenue to the east, Indian School Road to the south and 44th Avenue to the west. To date, ADEQ has conducted investigations at the following facilities in the site area:

- (1) F&B Mfg. Co. – 4316 N. 39th Avenue
- (2) Rinchem Co. – 4115 W. Turney Avenue
- (3) Hill Brothers Chemical Co. – 4450 N. 42nd Avenue
- (4) City of Phoenix Glenrosa Service Center (GSC) – 4020 W. Glenrosa Avenue
- (5) Pyramid Industries – 4330 N. 39th Avenue



Placement of new monitoring well North Plume site

Investigations at facilities within the site area have occurred since the late 1980s. The RI at the North Plume WQARF Site began in the late 1990s. Activities such as the installation of monitor wells, aquifer testing, periodic groundwater sampling, water level monitoring, and soil and soil-gas sampling continue. The RO work was completed at the end of 2008. Current contaminants of concern in groundwater at the site include PCE, TCE, 1,1-DCE, vinyl chloride, and chromium. These may change as new data become available.

F&B Mfg. Co.

F&B has operated at the site since 1967, manufacturing metal aircraft and spacecraft parts. The F&B facility is located near 39th Avenue and Montecito Avenue. Since 1967, F&B has been manufacturing metal aircraft and spacecraft parts and performing sheet metal forming, and

assembly. Solvents are used as degreasing agents to clean the surface of the metals. PCE was used as the degreasing solvent until approximately October 1987, when it switched to 1,1,1-TCA. In April 1991, ADEQ discovered information that PCE had leaked from F&B's degreaser into the soil under the building. Groundwater sampling confirmed the release.

In late 1992, ADEQ entered into a Consent Decree with F&B to conduct an RI/FS, remediate PCE-contaminated soil on-site, reimburse past costs and pay oversight costs. From 1995 until 1998, F&B was financially unable to fulfill the requirement under the Consent Decree. Between 1998 and 1999, ADEQ and F&B Mfg. Co. negotiated a new Consent Decree, which was approved by the Court in August 1999. Under the new Consent Decree, ADEQ will be completing the RI/FS and will conduct the remediation of the facility.

ADEQ has been operating a SVE system at the F&B facility since August 2001 to remediate the PCE contamination beneath the vapor degreaser. In addition, ADEQ removed approximately 210 cubic yards of soil beneath the vapor degreaser during two excavations in July 2000 and September 2001. As of November 2008, 41,624 pounds of PCE have been removed from the source area by the SVE system.

Rinchem Co.

Rinchem operated at 4115 W. Turney Avenue from 1982 to 1993 as a chemical warehouse and distribution business. Prior to 1982, the property was agricultural land. The company stored chemicals such as pesticides and solvents inside its warehouse and outside in above-ground storage tanks. Releases of chemicals from the chemical blending and repackaging operations, as well as drum washing operations, appear to be the source of the soil and groundwater contamination beneath the facility. ADEQ had a Groundwater Risk Model performed with information available from the former Rinchem facility. Based upon the results of the model it was determined that the concentration of *volatile organic compounds* (VOCs) in the soil did not merit the placement of a remedial system.

Hill Brothers Chemical Co.

Hill Brothers is involved in the sales, manufacturing and distribution of industrial chemicals and construction products. Releases of chemicals from the chemical blending and repackaging operations appear to be the source of the soil and groundwater contamination beneath the facility.

City of Phoenix GSC

This equipment storage and management facility has had a groundwater remediation program in effect since 1986 to address a release of unleaded gasoline from an underground storage tank (UST). It is estimated that over half a million gallons of unleaded gasoline leaked from the UST.

Pyramid Industries

Pyramid Industries operated its facility from 1977 to 1994 manufacturing telephone and television cable riser boxes. Operations included the dipping of galvanized metal into tanks containing sodium hydroxide, zinc-phosphate, and chromic acid. Wastewater and subsequent sludge generated from the operation reportedly contained zinc, lead, and chromium which were stored in drums. Field investigation activities for the WCP North Plume Site have been conducted between 1984 and the present time. Several contaminants have been detected in soil and groundwater

samples collected during field investigations at the four facilities. The primary contaminants of concern are PCE, TCE, and 1,1-DCE.

In August 2006, ADEQ issued the Draft RI Report for the WCP North Plume Site for public comment to meet the requirements established under A.R.S. §49-287.03 and A.A.C. R18-16-406.

WEST OSBORN COMPLEX (WOC) SITE

The WCP WOC Site's groundwater contamination 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. The WOC facility was originally one large area (about 15 acres) built in the late 1950s. In the mid 1970s, the property was subdivided and sold as three separate properties which are further located by the street addresses of 3536, 3600, and 3640 W. Osborn Road. Today, this area consists mainly of buildings and pavement which are partially fenced.

Since the 1950s many businesses have operated at the site, many of which manufactured capacitors, diodes, transistors, and semiconductor parts. Industrial solvents such as TCE, alcohol, and acetone were used in their production and cleaning processes. It is known that TCE was disposed of in septic tanks and seepage pits. In 1989, ADEQ collected *soil gas* samples on the three properties, finding TCE, PCE, TCA, and 1,1-DCE. Legal settlements were reached with United Industrial Corp. (United), Nucor Corp., and Components, Inc. (Corning) to assist in the ongoing investigations. The RI began in 1996 through the legal settlement with United.

An interim groundwater pump and treat system was approved by ADEQ in 1998. However, the operation of that system became no longer feasible when the water levels beneath the site dropped approximately 20 feet due to the concrete lining of the SRP Grand Canal. To replace the pump and treat system, a SVE system was installed in August 1999 as an Early Response Action. United operated the SVE system from August 1999 through October 2002 to remediate the contamination beneath the WOC property. United completed the soil cleanup at the property and permanently shut down the SVE system in March 2004.



*Soil Vapor Extraction System at
West Osborn Complex Site*

In August 2004, ADEQ issued the Draft RI Report prepared by United for the WCP WOC Site for public comment to meet the requirements established under A.R.S. §49-287.03 and A.A.C. R18-16-406. No comments were received during the 30-day comment period. In April 2005, ADEQ issued the Proposed RO Report for the WCP WOC Site 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 2005. 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.

United is currently conducting the FS to evaluate specific remedial measures and strategies required to meet the remedial objectives so that the groundwater can be remediated. In June 2006, as part of the FS, United installed additional monitoring wells to further define the extent of shallow groundwater contamination emanating from the WOC property.

Current information regarding site activities is available on the ADEQ Web site at: www.azdeq.gov/enviro/waste/sps.

2.3 Public Health Impact

The primary contaminants known to be present at levels above regulatory limits at the WCP Area include the solvents TCE and PCE, which are present in the groundwater and in some soils.

To date, testing in the WCP WQARF Area indicates almost no chance of human contact with the contamination. Sampling shows that the contaminated soils are under asphalt parking lots, asphalt-surfaced storage areas, or concrete building floors. In addition, contaminated drinking water wells in the area have been shut down and notices have been sent to all known residences within the WCP WQARF Area for the testing of domestic wells. The majority of risk associated with contaminated water is direct exposure by bathing or drinking; however, in this case, there is no known exposure path to endanger the public.

As discussed earlier, groundwater containing the contaminants PCE and TCE has been found in some areas of the WCP WQARF Area. People who drink PCE in excess of the MCL over many years could have problems with their liver, kidneys, or nervous system and may have an increased risk of getting cancer. Those who drink water containing TCE in excess of the MCL over many years could experience problems with their liver and may have an increased risk of cancer. However, it is important to remember if homes are connected to a public drinking water system, the water providers are required by law to supply water that meets all state and federal drinking water standards. Regular testing is completed to make sure that the drinking water is safe.

At this time, no one is known to be drinking the contaminated water. If you are using a private well in the site and your well has not been tested, contact ADEQ Project Manager André Chiaradia at (602) 771-4191.

2.4 Environmental Impact

Contamination has affected the environment by impacting both groundwater and soil in portions of the WCP WQARF Area. It is unlikely that any biological impacts will occur.

2.5 Remedy Selection Process

Since each of the five sites is in varying stages of investigation, remedy selection (choosing a cleanup method) will occur as each project progresses. Once RIs are complete, feasibility studies (FS), other data, and public comments will assist in the development of proposed and selected remedies. The CAB will also play an active role in the process. After the FS is completed for each site, a *proposed remedial action plan* (PRAP) will be completed which will detail ADEQ's recommendation for the final remedy at the site.

ADEQ will issue a notice and hold a public meeting during the comment period to inform the public of the availability of the PRAP and to ensure that the public has an opportunity to comment on the plan. ADEQ will then complete a comprehensive responsiveness summary. Public notice will be provided on the availability of both the responsiveness summary and *record of decision*

(A.A.C. R18-16-404). If significant changes are made to the remedial action plan as a result of the comments received, ADEQ will provide notice to the public.

Please see Sections 4.2.6 through 4.2.10 of this document for a more detailed description of the remedial selection process.

CHAPTER 3 - Community Profile

3.1 Community Involvement Area (CIA)

The WCP WQARF Area was originally defined as a 21-acre area in west Phoenix. Based on a 1984 survey of more than 400 businesses that may have stored, handled, or disposed of hazardous substances, it was determined that the contamination came from several sources. Over time, ADEQ identified RPs for the contamination and has made extensive efforts to work with them to investigate and begin cleanup of the sites.

As required by law, ADEQ established a CIA with the approximate boundaries of Camelback Road to the north, Roosevelt to the south, 53rd Avenue to the west, and Interstate 17 to the east. The boundaries were determined based on characteristics such as groundwater plume direction and velocity, proximity to residential areas and public facilities, and the affected resource (e.g., water, soil). See Appendix B for a CIA map.

As part of the sixth most populated city in the United States, the WCP Water Quality Assurance Revolving Fund (WQARF) CIA contains approximately 56,565 households. With a mixture of residential, commercial, and light industrial uses, the area is an established part of Phoenix, but its population is fairly transient.

2000 U.S. Census data of the CIA indicate that the total population was 195,401 with an average household size of 3.5 persons. Many residents own their home (58.4%) versus rent (41.6%). The median resident age is 26.1, which is younger than the average for the city of Phoenix (30.7).

The community is 51.2% White, 5.4% Black, 2.4% American Indian, 2.0% Asian, 34.5% other, and 4.3% two or more races. The census also gathers additional information that specifically asks individuals to identify themselves as Hispanic or “Not Hispanic.” According to that data, those who consider themselves belonging to two or more races in WCP Area is composed of 62.2% Hispanic individuals, which is significantly higher than the rate for the city of Phoenix (34.1%) and the state of Arizona (25.3%). All percentages given in the last two paragraphs are median averages of the 2000 U.S. Census data for the five zip code areas within WCP. These are: 85009, 85017, 85019, 85031 and 85035.

Demographic information for the WCP CIA, including race, age, and average household size is compared to the city of Phoenix and state of Arizona statistics in charts found in Appendix C. community and neighborhood summary is found in Appendix D. A list of community schools is found in Appendix E.

The following table compares the demographics for the City as a whole to those for the WCP WQARF sites distributed over the two most representative zip codes. The zip codes are larger than the CIA for the WCP WQARF sites. The numbers are from the 2000 U.S. Census. See Appendix C for more in-depth demographic information.

Demographic	City of Phoenix 2000 Census	Zip Codes 85019 & 85009 2000 Census
Population	1,321,045	81,621
White, Non-Hispanic Population	71.1% (938,853)	52.3% (41,013)
Hispanic Population	34.1% (449,972)	31.4% (55,669)
Speak language other than English	32.2% (388,445)	57.0% (44,493)
Single Family Houses	250,050	10,419
Age, years under 5	8.7% (114,516)	10.3% (8,497)
Age, years 65+	8.1% (106,795)	7.3% (5,550)

ADEQ looks at the community as a whole with an emphasis on the percentage of people who are unusually sensitive to contaminants. These people are those who are very young, the very old and people with health issues. The 2000 U.S. Census shows that within the five zip codes that encompass the WCP area, the percentage of age sensitive populations are as follows:

	85009	85017	85019	85031	85035
< 5 years	10.5%	11.1%	10.1%	10.2%	11.8%
> 65 years	5.9%	6.9%	8.7%	8.2%	3.8%

In comparison, the entire City of Phoenix population shows that 8.7 percent is under 5 years old and 8.1 percent are over 65 years of age. Please see Section 2.3 for further explanation of possible health effects from contaminants present at the site.

The CIA for these sites is located in U.S. House District 4 and represented by U.S. Congressman Ed Pastor. The U.S. Senators are Jon Kyl and John McCain.

The residents are represented by State Senators Richard Miranda (District 13); Debbie McCune Davis (District 14); Ken Chevront (District 15); Leah Landrum Taylor (District 16). The State Representatives are Martha Garcia (District 13); Chad Campbell and Robert Meza (District 14); David Lujan and Kyrsten Sinema (District 15); Clovis C. Campbell Jr. and Ben Miranda (District 16). Maricopa County Supervisor (District 5) is Mary Rose Wilcox.

3.2 Summary of Community Concerns and Issues

In March 2007 the ADEQ mailed out questionnaires to the WCP CIA requesting information to update the CIP. Twenty-two interested parties granted ADEQ permission to call them for interviews with respect to the WQARF sites in their community. Seventeen people were interviewed regarding their experience and opinions pertaining to remedial investigations (RI) and community involvement activities for the sites. A list of questions reviewed by ADEQ was used as a guide in conducting these interviews.

Of the 17 people interviewed, the following summarizes their responses to the list of questions asked at each interview.

Question 1: *How familiar are you with the cleanup at the WCP WQARF sites?*

Two respondents stated they were familiar with the sites. Eleven respondents were not very familiar with the sites and four respondents were not familiar at all with the sites.

Question 2: *What specific information about the WCP sites would you like to know?*

Four respondents wanted to know severity, length of project, projections, property value and quality of life. Three respondents wanted regular updates on the cleaning (remediation) of the sites. Two respondents wanted to know “everything there is to know” about the sites. Two respondents wanted to know about the effects of contamination on their health. One respondent wanted to know how long site remediation has been going on. One respondent wanted to know who is responsible for the cleanup. One wanted to know where the contamination is and what it is. One wanted regular water quality updates. One didn’t have a response.

Question 3: *What are your interests or concerns regarding the sites?*

Eight respondents stated they were concerned about the effects of the contaminants on the health of the community. Five respondents were interested in what is going on with the sites. Two respondents were concerned about water quality. One respondent was concerned for the children, and one respondent was concerned about what he can do.

Question 4: *Are you familiar with the community advisory board for the sites?*

Nine respondents were not familiar with the community advisory board. Five responded they were familiar through the mailers received from ADEQ. One respondent was “not really” familiar. Two respondents were familiar with the sites.

Question 5: *Have you attended CAB meetings? If yes then, do you have any suggestions for improving the way the information is disseminated at CAB meetings?*

Fifteen respondents said they have never attended a CAB meeting. One person responded “not recently” and recommended that ADEQ send out more mailers on CAB meetings. One respondent said he has not yet attended a CAB meeting.

Question 6: *Are you aware of the information repositories for these sites?*

Fourteen respondents were not aware of the site repositories, and three respondents were aware of the repositories.

Question 7: *Do you feel you have been kept adequately informed?*

Nine respondents felt they have been adequately informed. Four respondents felt they have been moderately informed. Four respondents felt they have not been adequately informed.

Question 8: *Do you have suggestions for getting other people in the community involved?*

Six respondents said “no”. Four respondents suggested more mailings. Two respondents said “word of mouth”. One respondent suggested communications through schools and city water bills. One respondent suggested English and Spanish T.V. and radio. One

respondent suggested Spanish mailers. One respondent suggested quarterly information materials. One respondent suggested clear, simple communications of any type.

Question 9: *Do you know who to contact at ADEQ regarding this sites?*

Six said they would refer to mailers they have received from ADEQ. Four replied no. Three replied yes. Two replied “no, but they would find out.” One said the phone book and one said the internet.

Question 10: *What is the best way for ADEQ to communicate with you about these sites in the future?*

Six respondents replied mailings. Five respondents replied by mail or phone. Two replied by phone. Two replied by email. One preferred mail or email. One preferred meetings and mailings.

Question 11: *Has ADEQ been responsive at the sites and to your concerns? Would you prefer to answer to a third party regarding this issue?*

Eight respondents said “yes”. Three respondents said “no”. One said “not necessarily”. Three respondents said they can’t answer the question or they didn’t know. One said “seems good”. One said “so far so good”.

Question 12: *In what capacity would you like to be involved with future activities?*

Four were not sure. Three respondents wanted mailings. Two wanted meetings and phone calls. Two wanted just meetings. Two wanted to be CAB members. One wanted meetings and mailings. One wants mailings and phone calls. One wanted just updates in any form and one wants to be involved “just a little”.

CHAPTER 4 - Community Involvement

4.1 Previous Community Involvement Activities

The peak of community involvement and interest in the WCP WQARF area occurred in the mid-1980s after the problem was first discovered. The relationship between groundwater contamination in the area and the Maryvale “cancer cluster” became a significant issue. Although extensive studies by various agencies remain inconclusive, no link between the area groundwater contamination and increased cancer rates in Maryvale has been found. Regardless, the situation caused a heightened public awareness of environmental issues in the area that has lasted to some degree today.



Seepage Pit that was removed from the West Osborn Complex Site

Many newspapers including the Arizona Republic, Phoenix Gazette, New Times, The Business Journal, and the Arizona Business Gazette, among others, published articles related to the WCP WQARF Area project. Some of the topics covered were the environmental investigations, search for RPs and possibility of a cancer cluster. Also during this time, a media release and newspaper display ads were produced to aid in the identification of former area employees who might have information about the types of chemicals used and/or wastes produced and methods of disposal at the sites under investigation. Public notices that were published in newspapers included those regarding legal settlements and planned technical activities. In 1998, the Arizona Department of Environmental Quality (ADEQ) placed a notice in the Arizona Republic that announced plans for a remedial investigation/feasibility study (RI/FS) and indicated that a scope of work, fact sheet, and CIP were available for public comment. The notice also provided the opportunity for a public meeting to discuss the RI/FS plans if significant public interest was expressed.

To keep the community informed, ADEQ has published seven project newsletters to date regarding various site activities and progress. Project updates, public meeting announcements, information repository locations, mailing list addition requests, and agency contact names and phone numbers were included in most newsletters. To accommodate the needs of the local community, several newsletters were produced in both English and Spanish. Public open house meetings were held in February 1994 and June 1994 at Maryvale High School and Maryvale Mall, respectively. These offered citizens the opportunity to review maps and displays as well as provide input and questions to the project team. Most residents were interested in learning about the results of investigations and the progress in cleaning up the sites.

In the past several years, community interest and media attention have been moderate to low. ADEQ and City of Phoenix staff reported that few inquiries have been received in the last five years, with the exception of realtors inquiring about the site boundaries. One of the most significant efforts to involve citizens in the project was the formation of the WCP WQARF Area Community Advisory Board (CAB) in September 2000. A selection committee appointed ten community members who represented a diverse cross-section of the community. Required under

Arizona law for WQARF sites, the CAB is a forum for community members to present and discuss their needs and concerns related to the environmental investigation and cleanup decision-making process. All meetings are open to the general public.

The first two CAB meetings were held on September 26, 2000 and May 24, 2001 and served as an orientation to the site background, WQARF Program, and roles and responsibilities of the CAB and ADEQ. Agendas and meeting minutes are available in the information repositories and on the ADEQ Web site. A fact sheet about the sites was distributed to residents within the CIA in March 2007. This fact sheet contained a CIP questionnaire, mailing list request form and application for participation on a CAB.

In addition to the interviews conducted for the purpose of this CIP, community members were interviewed in 2000 and 2002 and were familiar with the groundwater contamination situation to some degree. In 2000, it appeared that the level of interest and the need for ongoing information was moderate; 2002 interviewees generally suggested that the range is now moderate to low. Most believed that citizens are focused on other issues and feel comfortable that technical experts are addressing the contamination issues.

Previous community involvement activities and the date they occurred are listed below. Copies of site newsletters/fact sheets are available in Appendix K of this document.

Previous Community Involvement Activities West Central Phoenix WQARF Sites

Community Involvement Activity	Regulatory Citation/ Rule	Date
Establish CIA	A.R.S. §49-289.02	Completed 1998; Updated August 2006 and January 26, 2009
Notice of the site listing on the Registry	A.R.S. §49-287.01	Completed April 1998: East Grand Avenue; West Grand Avenue; North Plume; North Canal Plume May 1998: West Osborn Complex
Hazardous substance contamination notice	A.R.S. §49-289.02	Completed April 2000
Establish a CAB selection committee	A.R.S. §49-289.03	Selection committee met and voted on CAB members in April 2000.
Establish CAB	A.R.S. §49-289.03	Completed June 2000
Public notice of CAB meetings	A.R.S. §49-289.03	All CAB meeting agendas will be posted at all ADEQ offices and on ADEQ's web page. Agendas will be mailed to the site mailing list and notice will be given to community newspapers
Issue notice of RI scope of work, fact sheet and outline of CIP	A.R.S. §49-287.03 and A.A.C. R18-16-406	August 2004 Draft RI for WCP West Osborn Complex August 2006 Draft RI for WCP North Plume Site
Designate a spokesperson	A.R.S. §49-289.03	Designated June 2000
Fact sheets	A.R.S. §49-289.03	Fact sheets were distributed in February 2007

Community Involvement Activity	Regulatory Citation/ Rule	Date
Interviews with community members	A.A.C. R18-16-404	Interviews conducted in the years 2000, 2002 and 2007
Establish information repository	A.R.S. §49-289.03	2000
Notice of availability of Draft Land and Water Use Study	A.A.C. R18-16-404	1987
Public meeting to discuss Draft Land and Water Use Study	A.A.C. R18-16-404	1997
Notice of opportunity to comment on Draft RI Report and public meetings to establish ROs	A.R.S. §49-289.03	As appropriate to actual site progress/schedule
Notice of availability of proposed RO Report	A.A.C. R18-16-406 [A.A.C. R18-16-404(C)(1)(c)]	April 2005 Proposed RO for WCP West Osborn Complex September 2008 Proposed RO WCP North Plume
Public meeting to discuss proposed RO Report	A.A.C. R18-16-404	Tuesday, October 14, 2008
Public meeting to discuss revised RO Report	A.A.C. R18-16-404	As appropriate to actual site progress/schedule
Notice of availability of RO responsiveness summary	A.A.C. R18-16-404	As appropriate to actual site progress/schedule
Notice of availability of Final RO Report and final RI Report	A.A.C. R18-16-406	As appropriate to actual site progress/schedule

4.2 Community Involvement Rules and Statutes

This section describes what is required by the statutes and what community involvement activities have occurred for the sites.

4.2.1 Notice of the Site Listing on the Registry (A.R.S. §49-287.01)

This notice provides for a 30-day *public comment period* for the site being placed on the WQARF Registry. These notices were placed in the Arizona Republic in 1998.

4.2.2 Hazardous Substance Contamination Notice (§49-289.02)

This notice, usually in fact sheet form, includes information regarding the contaminants and risks associated with those contaminants, a site history and description, a CAB application, and an opportunity to be on the site mailing list. This requirement was satisfied by the fact sheet mailed in April 2000.

4.2.3 Establishment of a Selection Committee (A.R.S. §49-289.03)

In April 2000 ADEQ established a selection committee to select the WCP CAB members as directed by statute.

4.2.4 Community Advisory Board (A.R.S. §49-289.03)

A.R.S. §49-289.03 requires a five to 20 member board to be appointed to advise ADEQ and the public of issues, concerns and opportunities related to the investigation and cleanup of a site. The members are to represent a diversified cross-section of the community and meet at least four times per year.

The selection committee met in April 2000 to discuss the selection process and review the CAB applications. CAB applications were mailed to each WCP Sites resident that resided within the community involvement area (CIA).

CABs must meet within 90 days of their selection to elect co-chairs and develop a charter defining operating procedures, membership terms and obligations, and opportunities for public involvement. The CAB also reviews the CIP and, if necessary, proposes changes to the plan. The first meeting of the WCP CAB was held on September 26, 2000.

4.2.5 Availability of the Remedial Investigation (RI) Work Plan and the Solicitation of Information Regarding Foreseeable Uses (A.A.C. R18-16-404(C)(1)(a))

The first notice provides a 30-day public comment period to interested parties of the availability of the RI work plan or scope of work, site fact sheet, and outline of the CIP for review (A.R.S. §49-287.03). The second notice provides notification of the solicitation of information regarding the present and reasonably foreseeable uses of land and waters of the state. ADEQ will provide this notice once this process has been completed.

4.2.6 Public Comment on the Draft RI Report (A.A.C. R18-16-404(C)(1)(b))

After the extent of contamination and the uses of the land and water have been determined, a Draft RI Report is prepared that summarizes the data and information collected. This report is made available to the CAB, government agencies, and the public. The public is then given an opportunity to comment on the Draft RI Report. This notice also announces a public meeting required to establish remedial objectives. ADEQ will provide this notice once this process has been completed.

4.2.7 Public Comment on Proposed Remedial Objectives (RO) and Availability of Final RI Report (A.A.C. R18-16-404(C)(1)(c))

Proposed remedial objectives are identified to consider the current and reasonably foreseeable uses of land and water affected by the site as determined during the public meeting and public comment period for the Draft RI Report. This notice provides for a 30-day public comment period on this report. ADEQ will accept and consider public comment on the proposed remedial objectives and may hold a public meeting, depending on the level of interest. ADEQ will then prepare a Final RI Report.

The Final RI Report contains the Final RO Report and any responsiveness summaries regarding comments, issues and concerns raised during the community involvement process. ADEQ must provide notification to interested parties that the Final RI Report is

complete and is available for review. The notice will be published once the proposed ROs are complete. ADEQ will also mail a notice of the Final RI Report availability once the Final RI Report is complete.

4.2.8 Availability of the FS Work Plan (A.A.C. R18-16-404(C)(1)(d))

An FS is conducted to identify a remedy and alternative remedies that appear to be capable of achieving the established remedial objectives. This notification provides notice that the FS work plan is available for review. This notification will be mailed to interested parties on the mailing list once the FS work plan is complete.

4.2.9 Availability and Opportunity to Comment on the PRAP (A.A.C. R18-16-404(C)(1)(e))

The proposed remedial action plan is designed to inform the public and other interested parties of the proposed remedy. The notice will describe the remedy and its associated costs and provide for a public comment period. ADEQ may also hold a public meeting to discuss the plan if there is significant public interest. ADEQ will provide this notice once this process has been completed.

4.2.10 Availability of the Record of Decision (ROD) and Responsiveness Summary (A.A.C. R18-16-404(C)(1)(f))

Once the comment period for the PRAP has expired, ADEQ will prepare a record of decision for the site. The ROD provides a description of the remedy and a comprehensive responsiveness summary regarding all comments received on the PRAP. ADEQ will provide public notice to interested parties that the ROD and responsiveness summary are available for review once the ROD is completed.

4.2.11 Public Comment on the Operations and Maintenance Plan (A.A.C. R18-16-404(C)(1)(g))

The operations and maintenance plan for a water treatment facility is prepared to document that the facility can adequately protect public health against treatment system failure, a schedule and plan for monitoring, permit requirements, process for notification of treatment system failure, and that water quality standards will be achieved if the water is discharged to a water of the United States.

4.2.12 Public Notice of Request for Approval of Work (A.A.C. R18-16-404(C)(1)(h))

A request for approval of work is for any person who seeks approval of a remedial action at a site or a portion of a site on the Registry. If such a request were made, ADEQ would provide notice of this request and an opportunity to comment to interested parties.

4.2.13 Newsletters/Fact Sheets (A.A.C. R18-16-404(C)(1)(i))

Fact sheets are distributed to residents and interested parties regarding the status of the remedial action and other pertinent information (A.R.S. §49-289.03). Newsletters or fact sheets will be distributed regarding the status of the remediation and at other pertinent milestones. Options for distribution include providing fact sheets to interested parties and the sites mailing list, mailing to the entire CIA, or any other distribution list as deemed appropriate. During February 2007, a fact sheet was distributed. Please see Appendix K for copies.

4.2.14 Public Meetings at Remedial Milestones (A.A.C. R18-16-404(C)(1)(j))

Public meetings will be held to provide and discuss information regarding the site at remedial milestones and at other times ADEQ considers a public meeting to be necessary. The CAB may be consulted regarding the need for and details of the meeting. Public meetings may be noticed through mailings, media outlets, flyers and through CAB meetings. Public meetings may be held at each of the following milestones:

- **Beginning of the RI and FS** – The public will be given an overview of the project site, history and the RI/FS process and asked to identify any major issues or concerns associated with the project.
- **Identification of source and possible remedies** – The public will be given an overview of the results of the RI and the possible remedies for removing the source and cleaning up the groundwater. The participants will be asked to assist in evaluating the alternatives.
- **Prior to selection of final remedy** – The public will be given an overview of how previous public input was used along with technical data to select a proposed remedy and asked for input on the proposed remedy.
- **Prior to construction of final remedy (if applicable)** – The public will be given an overview of the process that was used to select the remedy and how their input was used, a preliminary design for the construction of the remedy, and will be asked to provide input into the design of the facility.

4.2.15 Establishment of a Public Repository (A.A.C. R18-16-404(C)(1)(k))

An information repository of all existing public documents pertaining to the investigation and *early response action (ERA)* is required to be placed in a publicly accessible location. A repository of all existing documents pertaining to the investigation and other milestones and well as CAB information is located at the ADEQ main office, 1110 W. Washington Street in Phoenix. A local repository containing major milestone documents is located at the Burton Barr Library, 1221 N. Central Avenue, Phoenix, 85004.

4.2.16 Public Notice of a Request for a Waiver (A.A.C. R18-16-404(C)(1)(l))

Public notice and notification to interested persons will be provided upon a request for a waiver. A request for a waiver is for any person who performs a remedial action at a site or a portion of a site and is not subject to any requirement to obtain any permit or approval. If such a request were made, ADEQ would provide notice of this request under A.R.S. §49-290.

4.2.17 Public Notice for Field Work That May Result in Off-Site Impacts (A.A.C. R18-16-404(C)(1)(m))

Public notice will be provided to those affected by field work which may result in any of the following: excess noise, light, odor, dust or other adverse impacts to those who live adjacent to the field work activity being conducted.

4.2.18 Public Notice of a Request for Remedial Objectives Satisfaction (A.A.C. R18-16-404(C)(1)(n))

A request for a satisfaction is for any person who performs a remedial action at a site or a portion of a site and is requesting that the Department determine whether each of the remedial objectives for the site has been satisfied and will continue to be satisfied. If such a request were made, ADEQ would provide notice of this request and an opportunity to comment.

4.2.19 Public Notice of CAB Meetings (A.A.C. R18-16-404(C)(1)(o))

Public notice of CAB meetings will be provided (A.R.S. §49-289.03). At least 24 hours in advance, the meeting agenda will be posted in all ADEQ offices and on the ADEQ web page. The CAB agenda will also be mailed to the entire site mailing list within two weeks of the meeting. Additionally, the meeting notice will be e-mailed to all CAB members and reminder phone calls are made to each CAB member the day before the meeting.

4.3 Communication Techniques

A variety of techniques to communicate with the public may be used throughout the process.

4.3.1 Written Information

All community information was documented in consideration of local demographics (see Appendix C). Written materials will be published in English. If requested, ADEQ will provide written materials in Spanish.

The primary method for providing written information will be through newsletters and fact sheets distributed to homes and businesses located within the CIA. Meetings agendas and public notices will be mailed to the site mailing list and posted on the ADEQ Web page. If public notices are required to be published in the newspaper, the notice will be published in the Arizona Republic. A full list of media outlets is provided in Appendix H.

4.3.2 Verbal Communication

Verbal communication includes interviews, presentations, site visits, and telephone contacts. A designated spokesperson informs the public of upcoming events, ensures that the CIP is implemented according to schedule, and acts as liaison between ADEQ and the community. In addition, the spokesperson plans and determines methods for personal contacts, arranges for the availability of a translator at meetings as needed, and arranges for the recording of presentations when appropriate. The designated spokesperson for the sites is Delfina Olivarez, ADEQ Community Involvement Coordinator. Ms. Olivarez may be reached at ADEQ, 1110 W. Washington St., Mail Code 4415A-1, Phoenix, Arizona 85007. By phone: (800) 234-5677, Ext. 771-4710 or (602) 771-4710, Fax (602) 771-4138.

Opportunities to make personal contacts with ADEQ staff and community members include:

Public Meetings - Public meetings or open houses may be scheduled and conducted as needed and as determined by ADEQ and the CAB.

CAB Meetings - Information presentations about the site investigations and cleanup will be delivered to CAB members at regularly scheduled CAB meetings. CAB members may advise ADEQ on appropriate means of delivering information through public meetings and other events in or near the CIA. Further, members of the CAB will communicate with their neighbors and other affiliations about the project and provide input from the public to assist in the development of fact sheets.

Site Tours - Tours of the treatment facilities can be requested and arranged in conjunction with the property owners and current laws and regulations by contacting ADEQ staff members.

Neighborhood Associations, Home Owners Associations, and Other Groups - When requested and if schedules permit, ADEQ will provide presentations to such groups as neighborhood associations, home owners associations and other groups. A list of CIA groups is listed in Appendix D.

CHAPTER 5 - Community Specific Considerations

Additional community involvement activities not detailed in this CIP will be considered as they are identified in order to serve the needs of the community and as appropriate to the project. The following community specific considerations are described below:

5.1 CAB and Public Meeting Locations

CAB meetings will be held at facilities that are available for the scheduled date. Meetings will be held at a location mutually agreed upon by the CAB members and an ADEQ representative. Care will be taken to ensure the location is easily accessible for the public to attend.

5.2 Newsletter/Fact Sheet Publication Dates

Fact sheets/newsletters will be published at specific remedial milestones or at other times as deemed appropriate by ADEQ and the CAB. The mailings will be distributed according to this plan.

5.3 Mailing List

ADEQ maintains a mailing list for the WCP sites. Mailing list addresses are compiled through the return of mailing list coupons from fact sheets, open house/public meeting attendees, CAB meeting attendees, and other individuals who request to be on the mailing list. All public notices including fact sheets, and meeting agendas are mailed to the mailing list.

5.4 Future Community Involvement Activities

The project team will provide information as needed and ask for community input as each of the following milestones is reached:

- 1. Project overview/availability of CAB applications** - public will be given an overview of the project, the WQARF process, investigations to date, status of the project, and how they may become involved in the CAB.
- 2. Results of site investigation/identification of possible remedies** - public will be given an overview of the results of the site investigations and an opportunity to comment on remedial objectives as presented by ADEQ.
- 3. Prior to selection of final remedy** - public will be given an overview of how previous public input was used along with technical data to select a tentative remedy for the PRAP, and public will be asked for input on the proposed remedy.
- 4. Prior to construction of final remedy (if applicable)** - public will be given an overview of the process that was used to select the remedy and how their input was used, and a preliminary design for the construction of the remedy, including

additional precautions that will be taken to prevent potential exposure during specific construction activities.

5. **Prior to the operation of the remedy (if applicable)** - public will be given an opportunity for a site tour and explanation of how the system will operate.
6. **Quarterly and annual progress updates** - after the groundwater remedy is in place, quarterly progress updates can be given to the CAB to assess community concerns and provide updated information.

Upcoming Community Involvement Activities

Community Involvement Activity	Regulatory Citation/Rule	Date
Public notice of CAB meetings	A.R.S. §49-289.03	At least 24 hours in advance of meetings; meeting agendas are posted in all ADEQ offices and on the ADEQ Web page.
Fact sheets	A.R.S. §49-289.03	Future fact sheets to be distributed as needed in conjunction with project milestones. Latest fact sheet February 2007
Notice of availability of FS work plan	A.A.C. R18-16-407	As appropriate to actual site progress/schedule
Notice and notification to interested parties of the availability of PRAP	A.A.C. R18-16-408	As appropriate to actual site progress/schedule
Notice and notification to interested parties of the availability of record of decision and responsiveness summary	A.A.C. R18-16-410	As appropriate to actual site progress/schedule
Notice and notification to interested parties of operations and maintenance plan	A.A.C. R18-16-411	As appropriate to actual site progress/schedule
Notice and notification to interested parties of a request for approval of work	A.A.C. R18-16-413	As appropriate to actual site progress/schedule
Notice and notification to interested parties of a request for waiver	A.R.S. §49-289.03	As appropriate to actual site progress/schedule
Notice for field work that may result in off-site impacts	A.A.C. R18-16-404	As appropriate to actual site progress/schedule
Notice of a determination of completeness of the remedy	A.A.C. R18-16-416	As appropriate to actual site progress/schedule

APPENDICES

for the West Central Phoenix WQARF Sites

- A. Community Involvement Area
- B. Site Boundary Maps
- C. Demographic Summary and Graphs
- D. Community and Neighborhood Organizations
- E. Community Schools
- F. Information Repository Locations
- G. Local Government Officials
- H. Media Outlets
- I. Arizona Department of Environmental Quality Contacts
- J. Glossary of Terms and Acronyms
- K. Fact Sheets

A. Community Involvement Area

ADEQ has established the Community Involvement Area (CIA) for the sites (A.R.S. §49-289.02(A) and (B)). CIAs are established to designate a geographic area to which mass mailings will be delivered. CIA boundaries are determined based on site-specific characteristics such as: the affected media (i.e., soil, surface water, or groundwater), exposure routes, proximity to residential areas and public facilities, and level of interest in the community. The CIA may be adjusted as new information is received.

The CIA for the West Central Phoenix WQARF sites shall be delineated as follows:

North Boundary: From 53rd Avenue and Camelback Road, east on Camelback Road to I-17 or 25th Avenue.

East Boundary: From I-17 or 25th Avenue and Camelback Road, south on I-17 or 25th Avenue to Roosevelt Street.

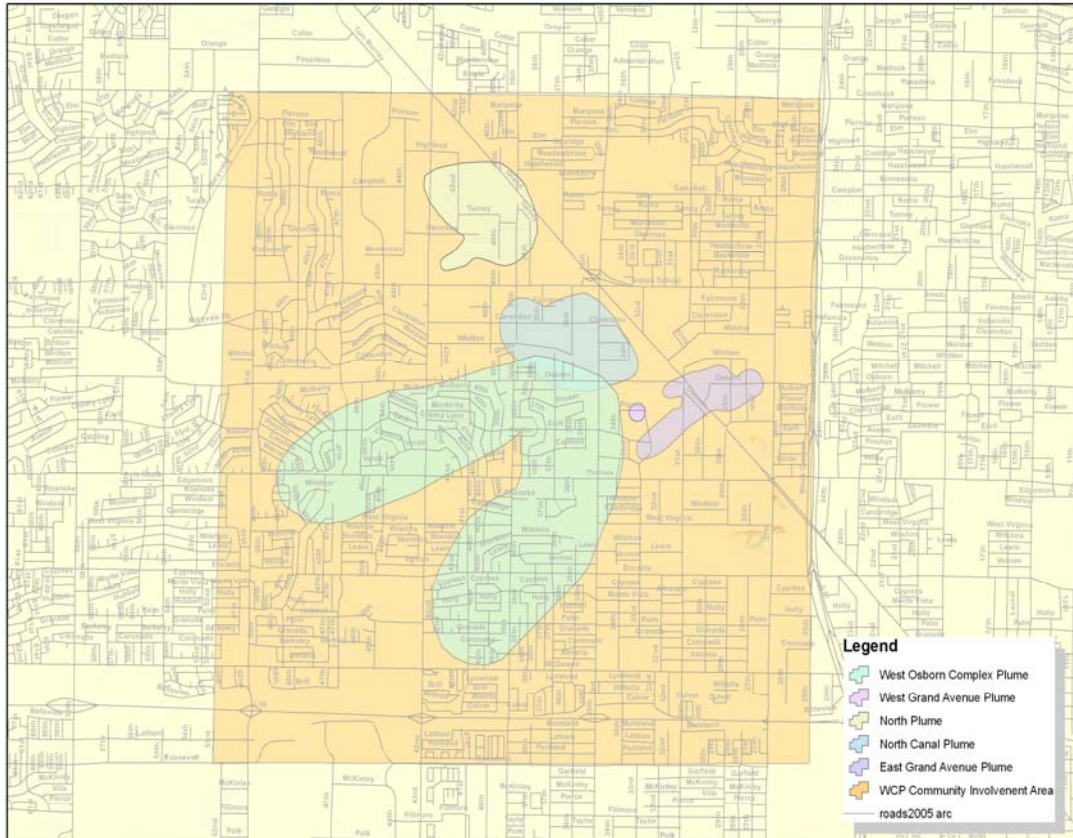
South Boundary: From I-17 or 25th Avenue and Roosevelt Street, west on Roosevelt Street to 53rd Avenue.

West Boundary: From Roosevelt Street and 53rd Avenue, north on 53rd Avenue to Camelback Road.

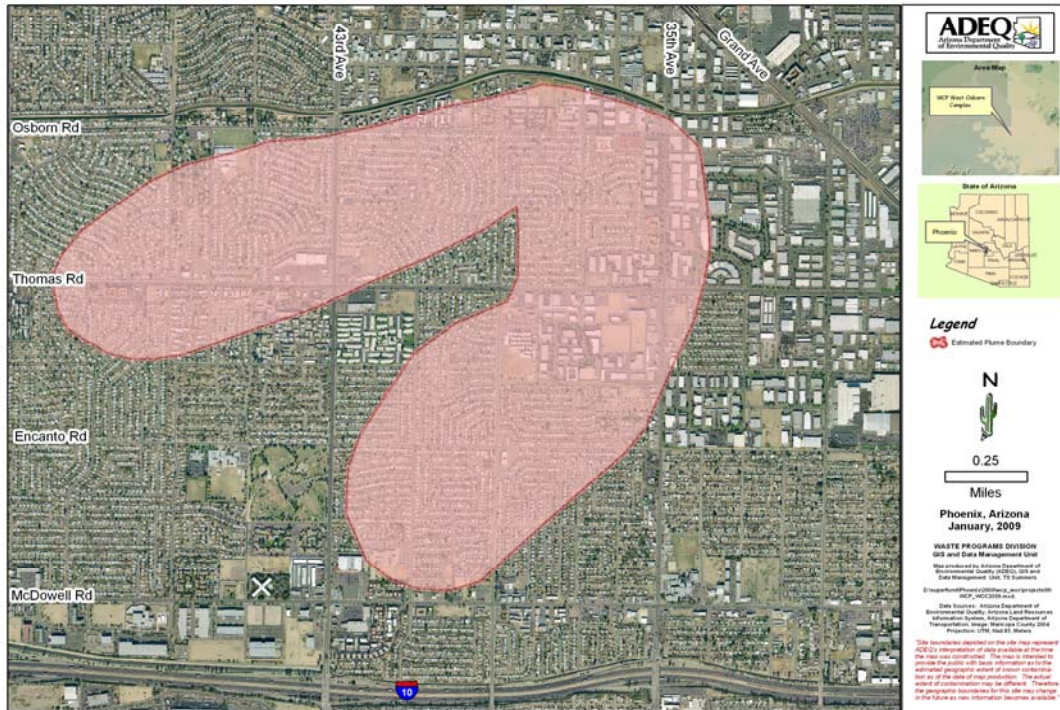
The maps of the CIA are attached.

B. Site Boundary Maps

West Central Phoenix Community Involvement Area, 2009



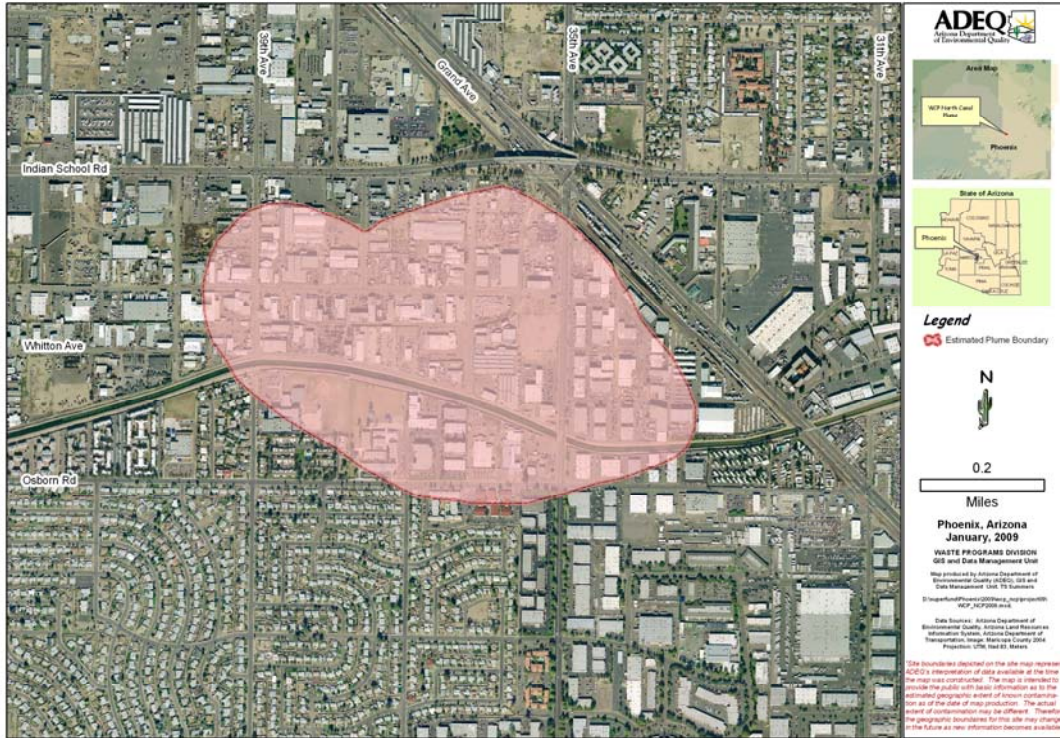
West Central Phoenix (WCP) West Osborn Complex WQARF Site



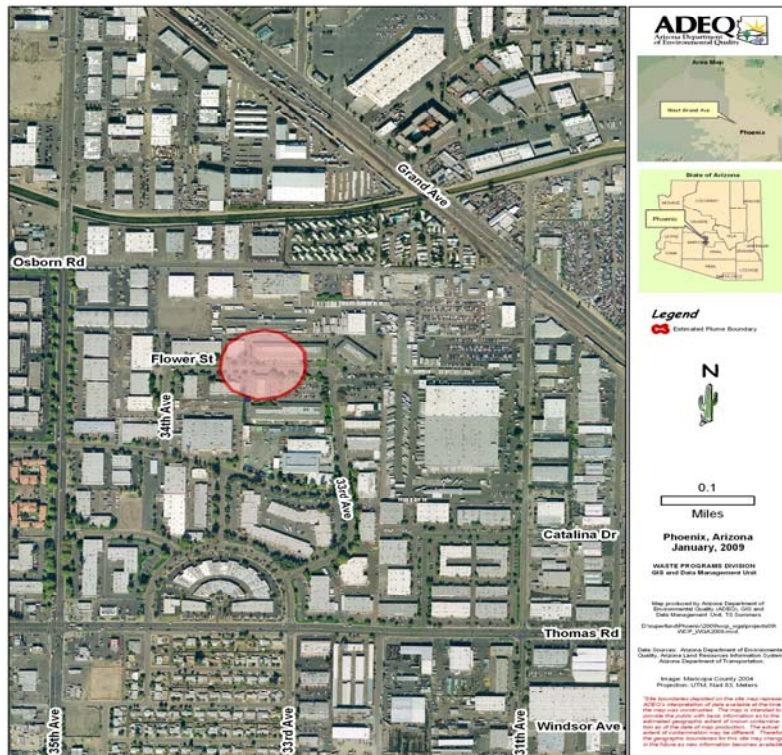
West Central Phoenix (WCP) North Plume WQARF Site



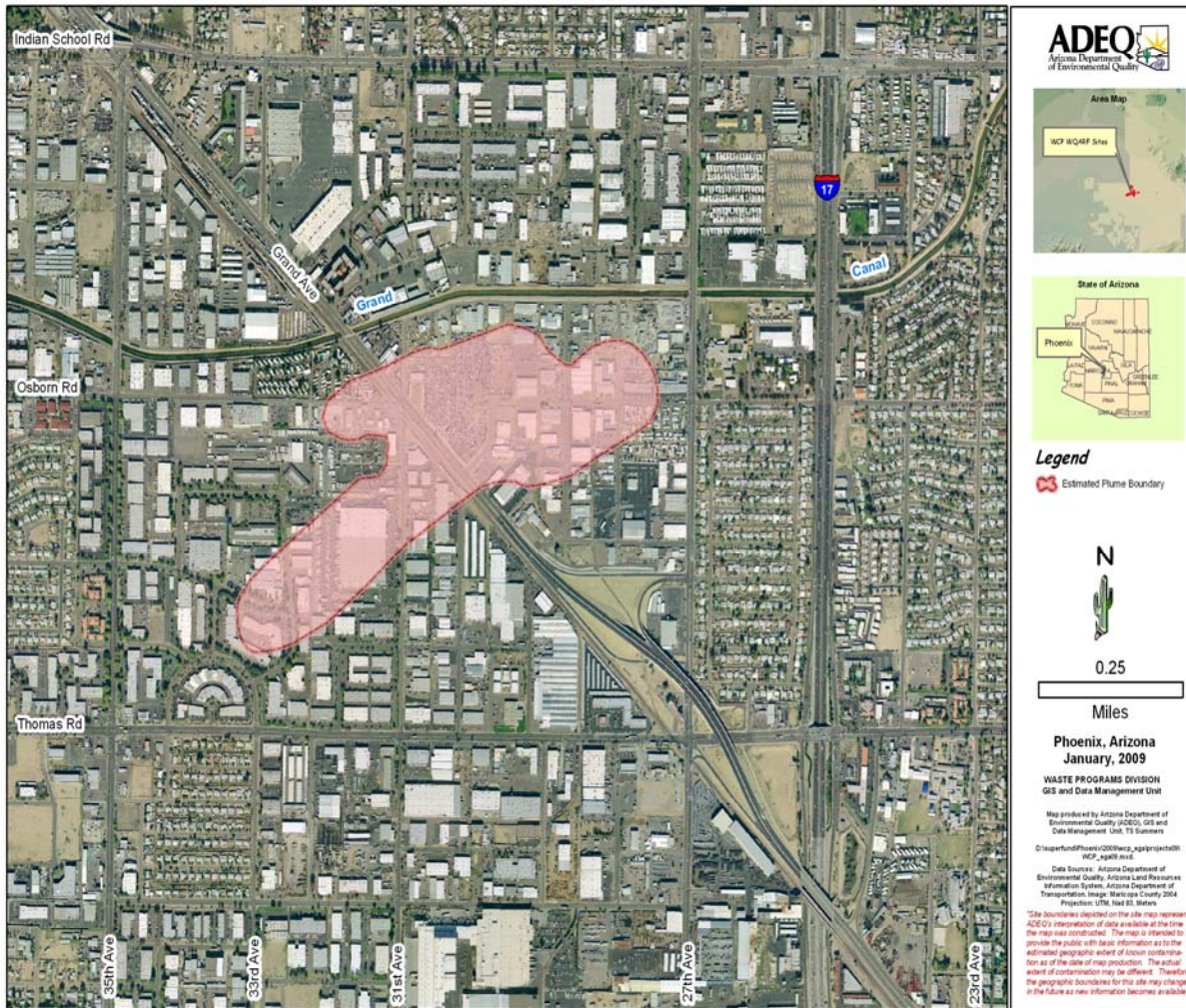
West Central Phoenix (WCP) North Canal Plume WQARF Site



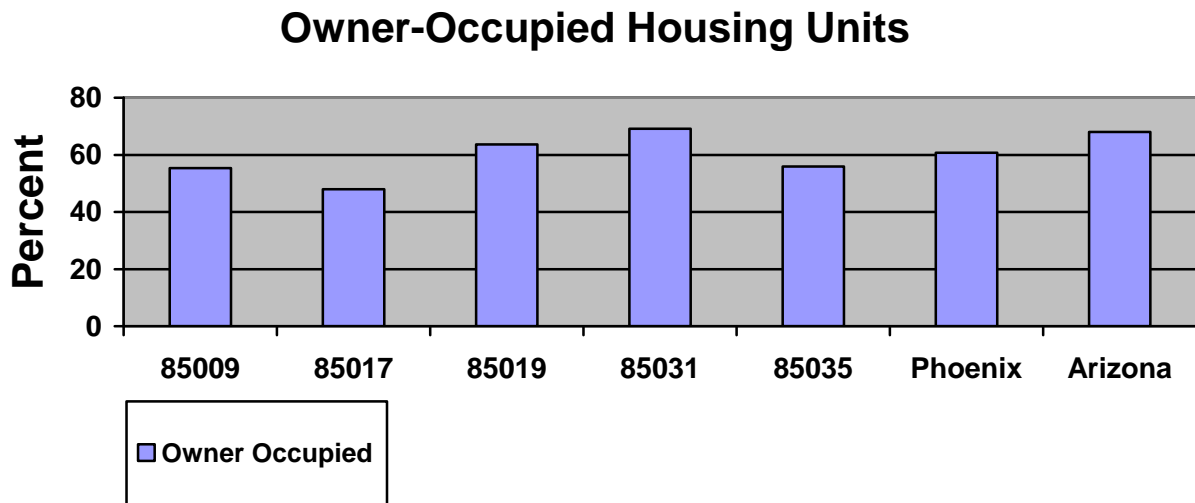
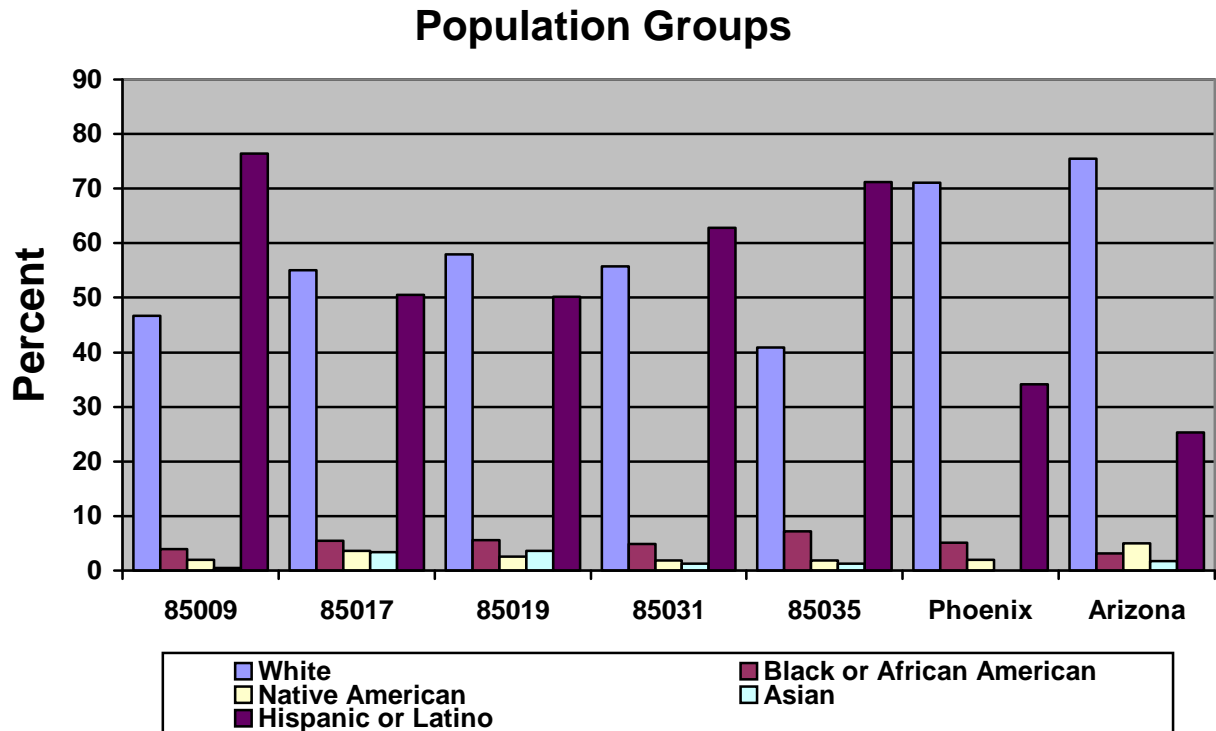
West Central Phoenix - (WCP) West Grand Avenue WQARF Site



West Central Phoenix (WCP) East Grand Avenue WQARF Site

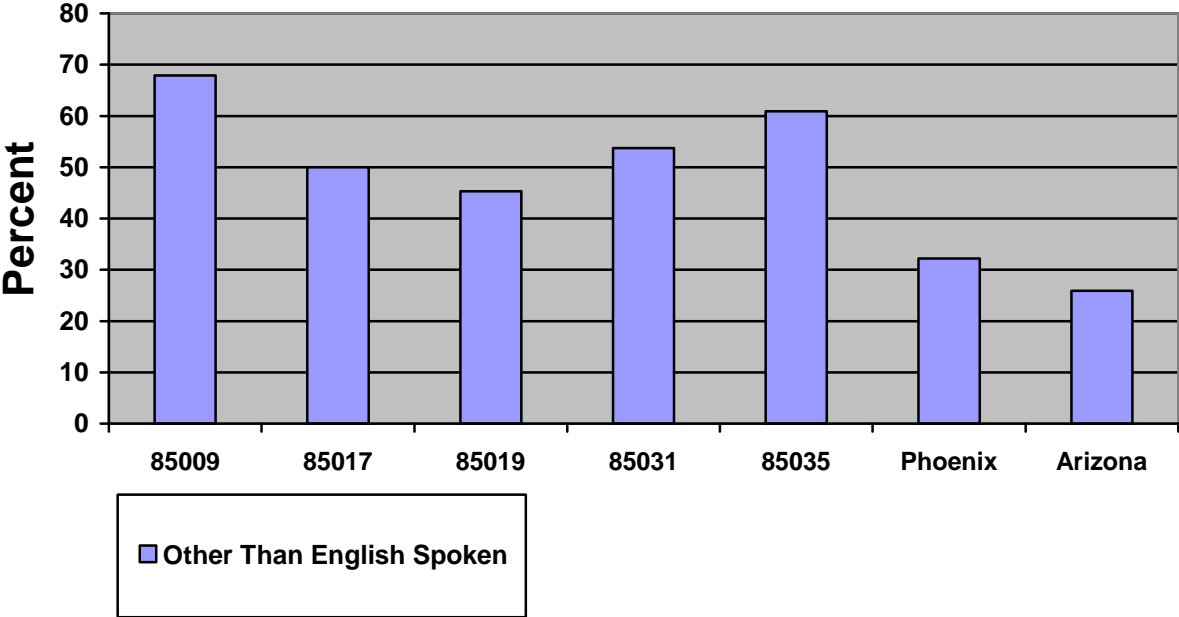


C. Demographic Summary and Graphs



Source: U.S. Bureau of the Census,
2000

Language Other Than English Spoken At Home



*Source: U.S. Bureau of the Census,
2000*

D. Community and Neighborhood Organizations

AMERICAN HOMES

Ms. Kitty Pyles, 3331 W. Cambridge Ave., Phoenix AZ 85009 (602) 272-6426

AMIGOS BLOCK WATCH

Ms. Enid Carvajal, 4846 W. Virginia Ave., Phoenix AZ 85035 (602) 352-8654

AMISTAD

Ms. Gloria Sesma, 3402 W. McDowell Rd., Phoenix AZ 85009 (602) 484-471

ANDALUCIA NEIGHBORHOOD ASSOCIATION

Mr. Jerry Joaquin, 4142 N. 47th Ave., Phoenix AZ 85031 (623) 247-0574
<http://www.neighborhoodlink.com/phoenix/andalucia>

ASHLAND ENCANTO ESTATES 3 NEIGHBORHOOD ASSOCIATION

Ms. Kathy Cale, 1924 W. Ashland Ave., Phoenix AZ 85009 (602) 262-7125

AVANTE BLOCK WATCH

Ms. Sonia Venegas, 6161 W. McDowell Rd., Phoenix AZ 85035 (623) 322-1100

BETHANY GLEN WEST BLOCKWATCH

Ms Suzi Coleman, 6844 N. 33rd Ave., Phoenix AZ 85017-1075 (602) 973-5553

CACTUS PARK 91 BUSINESS ALLIANCE

Mr. Walt Camping, 4427 N. 27th Ave., Phoenix AZ 85017 (602) 864-7860

CANYON CORRIDOR COMMUNITY COALITION / WEED & SEED

Mr. Jak Keyser, 6717 N. 30th Dr., Phoenix AZ 85017 (602) 499-4224

CARL HAYDEN COMMUNITY CENTER

Ms. Edna Perez, 3216 W. Van Buren St., Phoenix AZ 85009 (602) 269-2578

CORDOVA NEIGHBORHOOD ASSOCIATION

Mr. Larry Fallis, 2720 W. Solano Dr. N., Phoenix AZ 85017 (602) 242-4696
<http://members.cox.net/cordova-phx>.

DESERT HOPE

Ms. Billie Jo Dahmer, 5935 W. Windsor Ave., Phoenix AZ 85035 (602) 863-8331

ENCANTO WEST NEIGHBORHOOD ASSOCIATION

Mr. Larry Hackleman, 2630 N. 20th Ave., Phoenix AZ 85009 (602) 265-2200

FLORES Y DETALLES

Ms. Cecilia Guerra, 3449 N. 39th Ave., Phoenix AZ 85019 (602) 484-4115

GARCIA NEIGHBORHOOD COALITION

Mr. Tony Figueroa, 2325 W. Papago St., Phoenix AZ 85009-6411 (602) 254-3285

GARCIA PARK NEIGHBORHOOD ASSOCIATION

Mr. Javier Villalba, 1020 S. 23rd Ave., Phoenix AZ 85009

(602) 256-0711

GARCIA WEST NEIGHBORHOOD ASSOCIATION

Ms. Jovita Dominguez, 2727 W. Pima St., Phoenix AZ 85009

(602) 272-7702

GARCIA WILDCAT BLOCK WATCH

Ms. Patricia Luton, 1801 S. 28th Dr., Phoenix AZ 85009

(602) 278-5031

<http://www.neighborhoodlink.com/phoenix/wildcat>

GARFIELD BLOCK WATCH

Ms. Frances Perez, P.O. Box 48858, Phoenix AZ 85009

(602) 278-8745

<http://www.neighborhoodlink.com/phoenix/garfield>

GRANADA BLOCK WATCH

Ms. Cheryl Lambert, 4155 W. Granada Rd., Phoenix AZ 85009

(602) 703-9030

GRANADA NEIGHBORHOOD ASSOCIATION

Mr. Paul Holzer, 2922 W. Campbell Ave., Phoenix AZ 85017

(602) 249-3222

<http://www.neighborhoodlink.com/phoenix/granada>

HAMILTON NEIGHBORHOOD COALITION

Ms. Debbie Garcia, 2020 W. Durango St., Phoenix AZ 85009

(602) 252-1539

HOMEDALE NEIGHBORS

Martin and Vickie Gonzales, 3924 W. Maricopa St., Phoenix AZ 85009

none available

<http://www.neighborhoodlink.com/phoenix/homedale>

HOMESTEAD NEIGHBORHOOD ASSOCIATION

Mr. Bill Truett, 2229 N. 58th Ave., Phoenix AZ 85035

(602) 484-9370

<http://www.members.cox.net/homesteadneighborhood/>

ISAAC ACTION BLOCK WATCH

Mr. Thomas Rich, 3407 W. Willetta St., Phoenix AZ 85009

(602) 269-0107

ISAAC COMMUNITY FOUNDATION, INC.

Dr. Mary Radcliffe, 3348 W. McDowell Rd., Phoenix AZ 85009

(602) 455-6718

<http://www.icfaz.org>

JOSEPH ZITO ELEMENTARY SCHOOL

Ms. Maria H. Barrios, 4434 W. Sheridan St., Phoenix AZ 85035

(602) 442-2500

KUBAN BLOCK WATCH

Ms. Colleen Shaw, 3415 W. Tonto St., Phoenix AZ 85009

(602) 272-0656

<http://www.neighborhoodlink.com/phoenix/kuban>

LAS CASITAS IMPROVEMENT ASSOCIATION

Ms. Bonnie Bauer, 2901 W. Fleetwood Lane, Phoenix AZ 85017

(602) 249-8075

LOS AMIGOS BLOCK WATCH

Mr. Larry Osborne, 2741 W. Fillmore St., Phoenix AZ 85009

(623) 208-7182

<http://www.neighborhoodlink.com/phoenix/losamigos>

LYNNWOOD APARTMENTS

Ms. Debra Gallardo, 6231 W. McDowell Rd., Phoenix AZ 85035

(623) 247-1717

MADOMA MANOR HOMEOWNERS ASSOCIATION

Mr. Patrick McCrohan, 2533 W. Hazelwood St., Unit #13, Phoenix AZ 85017

(602) 254-1869

<http://www.neighborhoodlink.com/phoenix/madoma>

MARIVUE PARK

Norma Veach, 5637 W. Earll Dr., Phoenix AZ 85031

(623) 247-7300

MARYVALE REVITALIZATION CORPORATION

Mr. Dwight Amery, 3454 N. 51st Ave., Ste #130, Phoenix AZ 85031

(623) 848-2795

MARYVALE U.N.I.T.E.

Mr. Dwight Amery, 5666 W. Pierson St., Phoenix AZ 85031

(602) 284-4077

<http://www.mvunite.com>

MARYVALE VILLAGE BLOCK WATCH ALLIANCE

Ms. Martha Garcia, 3454 N. 51st Ave., Ste 122, Phoenix AZ 85031

(623) 247-4764

<http://www.neighborhoodlink.com/phoenix/maryvill>

MCKINLEY BLOCK WATCH

Ms. Delores Joya, 3001 W. McKinley, Phoenix AZ 85009

(602) 272-4459

MITCHELL / GOLDEN GATE NEIGHBORHOOD ASSOCIATION

Ms. Irene Canez, 3640 W. Berkeley Rd., Phoenix AZ 85009

(602) 269-6778

MONTEBELLO BLOCK WATCH

Ms Ruth Gingras, 2603 W. Luke Ave., Phoenix AZ 85017

(602) 242-5017

<http://www.neighborhoodlink.com/phoenix/montebello>

MURPHY CRIME REDUCTION ALLIANCE

Mr. Conrad Spohnholz, 2345 W. Buckeye Rd., Phoenix AZ 85009

(602) 256-0730

MURPHY LADIES FRIENDSHIP CLUB

Ms. Iwana Mathews, 2330 W. Cocopah St., Phoenix AZ 85009

(602) 258-9451

MURPHY NEIGHBORHOOD ASSOCIATION

Ms. Maria Castellanos, 12 S. 27th Dr., Phoenix AZ 85009

(602) 484-0192

NETWORK OF NEIGHBORS

Ms. Beverly McGlamery, 4045 W. Montebello Ave., Phoenix AZ 85019

(602) 841-5047

NORTH 58TH AVE. BLOCK WATCH

Mr. Bill Truett, 2229 N. 58th Ave., Phoenix AZ 85035

(602) 484-9370

NORTHWEST HOMESITES ASSOCIATION

Mr. Jose Villela, 3320 W. Holly St., Phoenix AZ 85009

(602) 595-9254

OCOTILLO COMMUNITY PARTNERSHIP

Ms. Latonya Whitker, 3225 W. Ocotillo Rd., Phoenix AZ 85017

(602) 347-2412

OCOTILLO PARK BLOCK WATCH

Ms. Sybil Smith, 2820 W. Ocotillo Rd., Phoenix AZ 85017

(602) 242-2112

<http://www.neighborhoodlink.com/phoenix/ocotillo>

OMEGA ACADEMY SCHOOL DISTRICT

Ms. Jolene LeFlore, 5757 W. McDowell Rd., Phoenix AZ 85035

(602) 269-1007

OUR COMMUNITY BLOCK WATCH

Robert Chris Villela, 3320 W. Holly St., Phoenix AZ 85009

(602) 332-7018

OUR NEIGHBORHOOD BLOCK WATCH

Gerald & Helen Robnett, 3317 N. 40th Ave., Phoenix AZ 85019

(602) 278-4355

<http://www.neighborhoodlink.com/phoenix/onbw>

QUATROS II HOMEOWNERS ASSOCIATION

Mr. Ron Ludders, 5309 N. 28th Dr., Phoenix AZ 85017

(602) 542-0857

SAFE HAVEN, INC.

Ms. Melody Cabrera, 2345 W. Buckeye Rd., Phoenix AZ 85009

(602) 256-0730

<http://www.safehavenincaz.org>

SAINT SIMON & JUDE SCHOOL

Sr. Raphael Quinn, 6351 N. 27th Ave., Phoenix AZ 85017

(602) 433-7608

<http://www.simonjude.org>

SEVILLA COURT BLOCK WATCH

Ms Veon Thompson, 3849 W. Oregon Ave., Phoenix AZ 85019

(602) 995-6870

SHERMAN PARK NEIGHBORHOOD ASSOCIATION

Ms. Emma Cordova, 2207 W. Sherman St., Phoenix AZ 85009

(602) 253-4023

SPITALNY SCHOOL BLOCK WATCH

Mr. Jack Goodman, 4469 W. Avalon Dr., Phoenix AZ 85031

(602) 272-5059

<http://www.neighborhoodlink.com/phoenix/spitalny>

ST. MATTHEW'S / SHERMAN PARK FIGHT BACK

Mr. John Maurin, 340 N. 21st Ave., Phoenix AZ 85009

(602) 484-7777

SULLIVAN-MURPHY COUGARS BLOCK WATCH

Ms. Pat Buckmaster, 623 S. 29th Ave., Phoenix AZ 85009

(602) 272-8885

<http://www.neighborhoodlink.com/phoenix/smc>

THE COVE COMMUNITY BLOCK WATCH

Ms. Mary Hill, 2545 N. 83rd Ave., Phoenix AZ 85035

(623) 322-1050

THE WHEEL COUNCIL INC

Dora Rodriguez, 1702 S 27th Ave., Phoenix AZ 85009

(602) 253-4570

<http://www.thewheelcouncil.org>

U.P.E.M. (UNIDOS PADRES, ESTUDIANTES Y MAESTROS)

Ms. Silvia Salas, 4026 W. Granada Rd., Phoenix AZ 85009-2125

(602) 233-8040

UPEM/UPST

Ms. Silvia M. Salas, 3402 W. McDowell Rd., Phoenix AZ 85009

(602) 484-4713

<http://www.neighborhoodlink.com/phoenix/upet>

VECINAS UNIDAS

Ms. Hortencia Tafalla, 3211 W. Van Buren St., Unit 69, Phoenix AZ 85009

(602) 278-8856

VILLA DEL SOL APARTMENTS

Ms. Debra Gallardo, 6231 W. McDowell Rd., Phoenix AZ 85035

(623) 247-1717

VILLA VERDE NEIGHBORHOOD ASSOCIATION

Ms. Lanaya Nilsson, 1904 W. Holly St., Phoenix AZ 85009

(602) 476-1902

<http://www.neighborhoodlink.com/phoenix/vvna>

WEDGEWOOD COMMUNITY COUNCIL

Ms. Karen Francis, 2614 N. 49th Lane, Phoenix AZ 85035

(602) 272-7015

<http://www.neighborhoodlink.com/phoenix/>

WEST ALMERIA BLOCK WATCH

Demetrio & Brenda Picazo, 2803 W. Almeria Rd., Phoenix AZ 85009

(602) 269-9493

WEST PHOENIX BUSINESS ALLIANCE

Ms. Kathy Amery, 5666 W. Pierson St., Phoenix AZ 85031

none available

<http://www.wpbaonline.com>

WEST PHOENIX STARS

Mr. Stephen E. Ramer, 5717 W. Indianola Ave., Phoenix AZ 85031

(623) 247-5519

WESTVIEW MANOR BLOCK WATCH

Vicki Chriswell, 3631 W. Lynwood St., Phoenix AZ 85009

(602) 269-2771

<http://www.neighborhoodlink.com/phoenix/westview>

WILLOW PARK BLOCKWATCH ASSOCIATION

Mr. Walter Ansley, 2612 W. Melvin, Phoenix AZ 85009

(602) 272-9077

<http://www.neighborhoodlink.com/phoenix/willowp>

E. Community Schools

Acclaim Charter School,

Melanie Powers, 5350 W. Indian School Rd., Phoenix 85031

(623) 691-0919

Alfred F Garcia School

Donna Carrillo, 1441 S. 27th Ave., Phoenix 85009

(602) 353-5111

Alhambra Elementary District

Jim Rice, 4510 N. 37th Ave., Phoenix 85019

(602) 336-2920

Alhambra High School

Cecilia Peterson, 3839 W. Camelback Rd., Phoenix 85019
or Martin Hoeffel

(602) 764-6028

(602) 764-6022

Alhambra Traditional School

Tracey Lopeman, 3736 W. Osborn Rd., Phoenix 85019

(602) 484-8816

All Aboard Charter School, (dba All Aboard Charter School),

Frederick Miller or Rhonda Newton, 5827 N. 35th Ave., Phoenix 85017

(602) 433-0500

Alta E Butler School

Jeanne Valdez, 3843 W. Roosevelt, Phoenix 85009

(602) 442-2300

Andalucia Middle School

Kathy Moore, 4730 W. Campbell Ave., Phoenix 85031

(623) 848-8646

Andalucia Primary School

Jackie Doerr, 4530 W. Campbell Ave., Phoenix 85031

(623) 848-8420

Arthur M. Hamilton School

Mishay Tribble, 2020 W. Durango St., Phoenix 85009

(602) 353-5330

Twenty First Century Charter School, Inc. , (dba Bennett Academy)

Fred Bennett, 2930 W. Bethany Home Rd., Phoenix 85017
or Nancy Bennett

(602) 242-4220

(602) 943-1317

Bostrom Alternative Center

Thomas Jenkins, 3535 N. 27th Ave., Phoenix 85017

(602) 764-1700

Bret R. Tarver

Angela Graziano, 4308 N. 51st Ave. Suite 102, Phoenix 85031

(623) 691-1900

Bret Tarver Education Complex

Noreen Didonna, 3101 W. McDowell Rd., Phoenix 85009

(602) 442-2900

Byron A. Barry School

Darlene Little, 2533 N. 60th Ave., Phoenix 85035

(623) 691-5700

Career Success High School - Main Campus,

Name not available, 3816 N. 27th Ave., Phoenix 85017

(602) 285-5525

Carl Hayden High School

Stephen Ybarra, 3333 W. Roosevelt, Phoenix 85009

(602) 764-3035

Cartwright Early Childhood Center

Name not available, 5480 W. Campbell Ave., Phoenix 85031

(623) 691-5100

Cartwright School

Melissa Arnold, 5833 W. Thomas Rd., Phoenix 85031

(623) 941-4100

Catalina Ventura School

Scott Heusman, 6331 W. 39th Ave., Phoenix 85019

(602) 841-7445

Charles W. Harris School

Rita Martinez, 2252 N. 55th Ave., Phoenix 85035

(623) 691-4800

Cordova Middle School

Barbara Marshall, 5631 N. 35th Ave., Phoenix 85017

(602) 841-0704

Cordova Primary School

Margaret Watral, 5631 N. 35th Ave., Phoenix 85017

(602) 242-5828

Durango Detention

Mike Hopper, 3125 W. Durango, Phoenix 85009

(602) 506-4264

E-cademie, a charter high school – Woods

Keith Mason, 3160 N. 33 Ave., Phoenix 85017

(602) 385-4490

Esperanza Elementary School

Lina Munoz, 3025 W. McDowell Rd., Phoenix 85009

(602) 442-2800

Glenn L. Downs Elementary School

No name available, 3611 N. 47th Ave., Phoenix 85031

(602) 528-5541

Granada East School

Sandra Kennedy, 3022 W. Campbell Ave., Phoenix 85017

(602) 589-0110

Granada Primary School

Evelyn Garcia Rico, 3232 W. Campbell Ave., Phoenix 85017

(602) 841-1403

Heritage Elementary School

No name available, 4027 N. 45th Ave. Glendale 85031

(623) 935-1931

Heritage Elementary School

Aaron Robinson, 13419 W. Ocotillo, Glendale 85031

(623) 935-1931

Imagine Elementary School at Desert West

Dennis Cagle, 6738 W. McDowell Rd., Phoenix 85035

(623) 344-7155

Imagine Middle School at Desert West

Josh Jordan, 6738 W. McDowell Rd., Phoenix 85035

(623) 344-7150

Isaac Elementary District

Debra Hutson or Kent Scribner, 3348 W. McDowell Rd., Phoenix 85009 (602) 455-6700

Isaac Middle School

Armando Chavez, 3402 W. McDowell Rd., Phoenix 85009 (602) 455-6800

J. B. Sutton Elementary School

Mary Lou Chavez, 1001 N. 31st Ave., Phoenix 85009 (602) 442-3200

Jack L. Kuban Elementary School

Margaret Moya, 3201 W. Sherman St., Phoenix 85009 (602) 353-5441

Joseph Zito Elementary School

Gabriel Garcia, 4525 W. Encanto Blvd., Phoenix 85035 (602) 442-2500

Justine Spitalny School

Patricia Lopez, 3201 N. 46th Dr., Phoenix 85031 (623) 691-4400

Lela Alston Elementary

Debbie Hutson, 4006 W. Osborn Rd., Phoenix 85019 (602) 442-3000

Liberty Traditional Charter School

Bonnie Knaue, 4027 N. 45th Ave., Phoenix 85031 (602) 442-8791

Magnet Traditional School

Anthony Perkins, 2602 N. 23rd Ave., Phoenix 85009 (602) 257-6281

Manuel Pena Jr. School

Tracy Faulkner, 2550 N. 79th Ave., Phoenix 85035 (623) 691-3100

Marc T. Atkinson Middle School

Raul Pina, 4315 N. Maryvale Pkwy., Phoenix 85031 (623) 691-1700

Mitchell Elementary School

Linda Crawford, 1700 N. 41st Ave., Phoenix 85009 (602) 442-2600

Montebello School

Jeffrey Sprout, 5725 N. 27th Ave., Phoenix 85017 (602) 336-2000

Morris K. Udall Escuela de Bellas Artes

Monica Torres, 3715 W. Roosevelt St., Phoenix 85009 (602) 442-2700

Moya Elementary

Chris Gutierrez, 406 N. 41st Ave., Phoenix 85009 (602) 442-3100

Murphy Elementary District

Paul Mohr, Jr., 2615 W. Buckeye Rd., Phoenix 85009 (602) 353-5002

Ocotillo School

Phil Garitson, 3225 W. Ocotillo Rd., Phoenix 85017 (602) 347-2400

Omega Academy

Carmen Gulley, 5757 W. McDowell Rd., Phoenix 85035

(602) 269-1007

P. T. Coe Elementary School

Amanda Guerrero, 3801 W. Roanoke, Phoenix 85009

(602) 442-2400

Palm Lane

Richard Mauran, 2043 N. 64th Dr., Phoenix 85035

(623) 691-5500

Pan-American Elementary Charter

No name available, 3001 W. Indian School Rd., Phoenix 85017

(602) 266-3989

Peralta School

Mary Kay Radavich, 7125 W. Encanto Blvd., Phoenix 85035

(623) 691- 5600

Pueblo Del Sol Middle School

Gloria Garino-Spence, 3449 N. 39th Ave., Phoenix 85019

(602) 455-6900

RCB High School – Phoenix

Mark Hebert, 6049 N. 43rd Ave., Phoenix 85019

(602) 973-6018

S. Sturgeon Middle School

Carmen Gulley, 5757 W. McDowell Rd., Phoenix 85035

(602) 269-1007

Sevilla Primary School

Melissa Penniman, 3801 W. Missouri Ave., Phoenix 85019

(602) 242-0281

Sevilla West School

Kathy Davis, 3851 W. Missouri Ave., Phoenix 85019

(602) 347-0232

Spectrum Regional Academy

Janice Holland or Mike Hopper, 3445 W. Durango, Phoenix 85009

(602) 506-4264

West Phoenix High School

Robert Villa, 3835 W. Thomas Rd., Phoenix 85019

(602) 269-1110

West-MEC - Barry Goldwater High School

No name available, 2820 W. Rose Garden Lane, Phoenix 85031

(623) 445-3000

West-MEC - Western Maricopa Education Center

Gregory Donovan, 4949 W. Indian School Rd., Phoenix 85031

(623) 873-1860

William R. Sullivan Elementary School

Jose Diaz, 2 N. 31st Ave., Phoenix 85009

(602) 353-5220

F. Information Repository Locations

WEST CENTRAL PHOENIX WQARF SITES

An information repository of all existing public documents pertaining to the investigation will be placed in a publicly accessible location. Technical documents related to future milestones in the investigation also will be made available to the public.

The information repositories for the West Central Phoenix WQARF sites are located at:

Arizona Department of Environmental Quality

Records Management Center

1110 W. Washington Street

Phoenix, AZ 85007

recordscenter@azdeq.gov

Phone: (602) 771-4380

Toll-free in Arizona, call: 1-800-234-5677, Ext. 771-4380

Hours: Monday through Friday 8:30 a.m. to 4:30 p.m.

Burton Barr Central Phoenix Library

Reference Section under Government Documents

1221 N. Central Avenue

Phoenix, AZ 85004

Phone: (602) 262-4636

ADEQ WEB SITE

The Web page address is www.azdeq.gov. To access information about the West Central Phoenix sites from the home page, click on Waste Programs, Superfund/WQARF Programs, Site Information and Maps, and then Phoenix Area Site Information and Maps. ADEQ is on Twitter.

G. Local Government Officials

CITY Officials	COUNTY Supervisor	STATE Senators	STATE Representatives
City of Phoenix 200 W. Washington 11th Floor Phoenix, AZ 85003	Maricopa County 301 W. Jefferson 10th Floor Phoenix, AZ 85003	Arizona State Senate Capitol Complex 1700 W. Washington Phoenix, AZ 85007-2890	Arizona House of Representatives Capitol Complex 1700 W. Washington Phoenix, AZ 85007-2890
Mayor Phil Gordon (602) 262-7111	County Supervisor District 5 Mary Rose Wilcox (602) 506-7092	Senator - District 13 Richard Miranda Room # 308 (602) 926-5911	Representative – District 13 Martha Garcia Room # 126 (602) 926-5830
Vice Mayor District 4 Tom Simplot (602) 262-7444		Senator - District 14 Debbie McCune Davis Room # 311 (602) 926- 4485	Representative - District 14 Chad Campbell Room # 121 (602) 926-3026
Councilman District 7 Doug Lingner (602) 262-7492		Senator - District 15 Ken Chevront Room # 315 (602) 926- 5325	Representative - District 14 Robert Meza Room # 339 (602) 926-3425
Councilman District 8 Michael Johnson (602) 262-7447		Senator - District 16 Leah Landrum Taylor Room # 315 (602) 926-3830	Representative - District 15 David Lujan Room # 332 (602) 926-5829
			Representative - District 15 Kyrsten Sinema Room # 333 (602) 926-5058
			Representative - District 16 Cloves Campbell Jr. Room # 124 (602) 926-3042
			Representative - District 16 Ben Miranda Room # 323 (602) 926-4893

H. Media Outlets

Newspapers and Magazines

THE ARIZONA REPUBLIC P.O. Box 2245, Phoenix AZ 85002	(602) 444-8000
THE ARIZONA BUSINESS GAZETTE P.O. Box 194, Phoenix AZ 85001	(602) 444-7300
THE ARCADIA NEWS 3850 E. Indian School Road, Suite 1, Phoenix, AZ 85018	(602) 840-6379
LA VOZ <i>Hispanic Newspaper</i> 386 N. 1st Avenue, Phoenix, AZ 85003	(602) 253-9080
PRENZA HISPANA <i>Hispanic Newspaper</i> 1015 S. 6th Street, Phoenix, AZ 85034	(602) 256-2443

Radio

ARIZONA NEWS RADIO NETWORK (<i>AZ news and sports to 30 stations</i>) 14605 N. Airport Drive, Suite 370, Scottsdale, AZ 85260	(480) 483-8415 Fax: (480) 998-5751
KAZG AM <i>Valley Focus</i> 4343 E. Camelback Road, Suite 200, Phoenix, AZ 85018	(480) 941-1007 Fax: (602) 808-2288
KCTK AM 2425 E. Camelback Road, Suite 570, Phoenix, AZ 85016	(602) 955-9600 Fax: (602) 955-7860
KDKB FM <i>Valley Focus</i> 1167 W. Javelina, Mesa, AZ 85210	(480) 897-9300 Fax: (480) 491-8482
KEDJ FM 7434 E. Stetson Drive, Suite 265, Scottsdale, AZ 85251	(480) 423-9255 Fax: (480) 423-9382
KESZ FM 600 E. Gilbert Drive, Tempe, AZ 85281	(480) 966-6236 Fax: (480) 921-6396
KFLR FM 702 E. Thunderbird Road, Phoenix, AZ 85022	(602) 978-0903 Fax: (602) 548-8089
KFNN AM 4800 N. Central Avenue, Phoenix, AZ 85012-1722	(602) 241-1510 Fax: (602) 241-1540
KFNX AM 2001 N. Third Street, Phoenix, AZ 85004	(602) 277-1100 Fax: (602) 248-1478

KFYI AM 645 E. Missouri Avenue, Phoenix, AZ 85012	(602) 798-9322 Fax: (602) 798-9364
KJZZ FM 2323 W. 14 th Street, Tempe, AZ 85281	(480) 834-5627 Fax: (480) 733-9508
KKLT FM 5300 N. Central Avenue, Phoenix, AZ 85007	(602) 274-6200 Fax: (602) 266-3858
KLVA FM 1425 N. Market Boulevard, Sacramento, CA 95824	(602) 953-5130 Fax: (602) 953-5131
KMXP FM 645 E. Missouri Avenue, Suite 360, Phoenix, AZ 85012	(602) 279-5577 Fax: (602) 230-2781
KMYL AM 8611 N. Black Canyon Highway, Suite 206, Phoenix, AZ 85021	(602) 955-9555 Fax: (602) 955-3390
KNAI FM <i>Prensa Hispan</i> 3602 West Thomas Road, Suite 6, Phoenix, AZ 85019	(602) 269-3131 Fax: (602) 269-7646
KNIX FM <i>Valley Views</i> 600 E. Gilbert Drive, Tempe, AZ 85281	(480) 966-6236 Fax: (480) 921-6301
KOOL FM 4745 N. Seventh Street, Suite 210, Phoenix, AZ 85014	(602) 956-9696 Fax: (602) 285-1450
KOY AM <i>Urban Times</i> 600 E. Gilbert Drive, Tempe, AZ 85281	(480) 966-6236 Fax: (480) 377-2460
KPXQ AM 2425 E. Camelback Road, Suite 570, Phoenix, AZ 85015	(602) 955-9600 Fax: (602) 955-7860
KSLX <i>Valley Views</i> 4343 E. Camelback Road, Suite 200, Phoenix, AZ 85018	(480) 941-1007 Fax: (602) 808-2288
KSUN <i>Dialogando</i> 714 N. Third Street, Phoenix, AZ 85004	(602) 252-0030 Fax: (602) 252-4211
KTAR AM 5300 N. Central Avenue, Phoenix, AZ 85012	(602) 274-6200 Fax: (602) 265-9941
KUET FM 1641 E. Osborn Road, Suite 8, Phoenix, AZ 85016	(602) 266-2005 Fax: (602) 279-2921
KUPD FM 1900 W. Carmen, Tempe, AZ 85283	(480) 838-0400 Fax: (480) 820-8469
KXAM AM 4725 N. Scottsdale Road #234-236, Scottsdale, AZ 85251	(480) 423-1310 Fax: (480) 423-3867

KXEG AM	(602) 254-5001
4000 N. Central Avenue, Suite 720, Phoenix, AZ 85012	Fax: (602) 254-1010
KYOT FM	(602) 374-6000
4686 E. Van Buren Street, Suite 300, Phoenix, AZ 85008	
KZON FM	(602) 258-8181
840 N. Central Avenue, Phoenix, AZ 85004	Fax: (602) 440-6530
METRO NETWORKS	(480) 607-4200
14605 N. Airport Drive, Suite 330, Scottsdale, AZ 85260	Fax: (480) 607-4229

TELEVISION MEDIA

KAET TV 8 (PBS)	(480) 965-4542
Arizona State University, P.O. Box 871405, Tempe, AZ 85287	Fax: (480) 965-1000
KASW Channel 6 (CW)	(602) 207-3333
5555 N. Seventh Avenue, Suite A200, Phoenix, AZ 85013	Fax: (602) 207-3277
KSAZ (Cox Cable)	(602) 952-2988
4343 E. Camelback Road, Suite 130, Phoenix, AZ 85018	Fax: (602) 224-2214
KDRX Channel 48 & 56 (Telemundo)	(602) 712-2000
4625 S. 33rd Place, Phoenix, AZ 85040	Fax: (602) 254-4505
KNXV Channel 15 (ABC)	(602) 685-6397
515 N. 44th Street, Phoenix, AZ 85008	Fax: (602) 685-6363
KPHO Channel 5 (CBS)	(602) 650-0700
4016 N. Black Canyon Freeway, Phoenix, AZ 85017	Fax: (602) 650-0761
KPNX Channel 12 (NBC)	(602) 257-6630
1101 N. Central Avenue, Phoenix, AZ 85004	Fax: (602) 257-6619
KSAZ TV 10 (FOX)	(602) 262-5109
511 W. Adams, Phoenix, AZ 85003	Fax: (602) 262-0181
KTVK Channel 3 (Independent) and ¡Más! Arizona	(602) 207-3457
5555 N. Seventh Avenue, Phoenix, AZ 85013	Fax: (602) 207-3477
KTVW Channel 33 (Univision)	(602) 243-3333
6006 S. 30th Street, Phoenix, AZ 85042	Fax: (602) 276-8658
Phoenix Channel 11	(602) 261-8937
140 N. Third avenue, Phoenix, AZ 85003	Fax: (602) 534-9790

I. Arizona Department of Environmental Quality Contacts

WEST CENTRAL PHOENIX WQARF SITES CONTACTS:

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Phoenix, Arizona 85007

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rc6@azdeq.gov

Community Involvement Coordinator

Delfina Olivarez
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(800) 234-5677, Ext. 771-4710 (Toll-free in Arizona)
dco@azdeq.gov

J. Glossary of Terms and Acronyms

Arizona Department of Environmental Quality (ADEQ): ADEQ is the executive agency of the Arizona State Government mandated to enforce and administer the State's environmental laws and regulations.

Aquifer Water Quality Standards (AWQS): State of Arizona maximum levels for contaminants that apply to groundwater in aquifers designated for drinking water use. For example, the AWQS for tetrachloroethene (PCE) is 5.0 micrograms per liter (µg/L).

Arizona Revised Statutes (A.R.S.): State laws adopted by the Arizona State Legislature.

Cleanup: Actions taken which deal with a release or threat of a release of hazardous substances that could adversely affect public health and/or the environment. The word "cleanup" is sometimes used interchangeably with the terms remedial action, removal action, response action, remedy, remediation, or corrective action.

Chlorinated Solvent: An organic solvent containing chlorine atoms. Uses of chlorinated solvents include: aerosol spray containers, in highway paint, and dry cleaning fluids.

Community Advisory Board (CAB): A diverse group of community members interested in or affected by the presence of a WQARF site. By statute, ADEQ is required to form a CAB for each WQARF Registry site where ADEQ is initiating a remedial investigation. ADEQ seeks the CAB's input in the decision-making process and works with them from the onset of the RI/FS process until the requirements of the record of decision have been fulfilled.

Community Involvement Area (CIA): The mailing area of residences and businesses used in the notification for public meetings and other written notices regarding a site.

Community Involvement Plan (CIP): A document that identifies techniques used by ADEQ and EPA to communicate effectively with the public during the Superfund cleanup process at a specific site. This plan describes the site history, nature and history of community involvement, and concerns expressed during community interviews. In addition, the plan outlines methodologies and timing for continued interaction between the Agencies and the public at the site.

Contaminant: Any physical, chemical, biological or radiological substance or matter present in any media at concentrations that may result in adverse effects on air, water or soil. A harmful or hazardous matter introduced into the environment that is not normally found there, or not naturally occurring.

Contamination: Any hazardous or regulated substance released into the environment.

Dichloroethane (DCA): A colorless, oily liquid that is primarily used to make other chemicals, as a solvent, or degreaser.

Dichloroethylene (DCE): Used to make certain plastics, packaging materials, and flame retardant coatings. Typically, it is a degradation product of other chlorinated solvents.

Drywell: A bored, drilled, or driven shaft or hole whose depth is greater than its width, and disposes of unwanted water, most commonly storm water runoff, by dissipating it into the ground, where it merges with the local groundwater.

Early Response Action (ERA): Refers to a remedial action performed prior to the final remedy, and often prior to the remedial investigation. An ERA addresses current risks to public health, welfare, and the environment; protects or provides a supply of water; addresses sources of contamination; or controls or contains contamination where such actions are expected to reduce the scope or cost of the remedy needed at the site. Also referred to as an interim remedial action.

Facility: The term “facility” usually includes a place, site, or area where a hazardous substance has been deposited, stored, disposed of, placed, or otherwise came to be located.

Feasibility Study (FS): A process to identify a reference remedy and alternative remedies that appear to be capable of achieving the remedial objectives for the site. It is often done as part of a two-phase investigation in conjunction with a remedial investigation (RI).

Groundwater: Water located beneath the ground surface in soil pore spaces and in the fractures of geologic formations. A formation of rock or soil is called an aquifer when it can yield a usable quantity of water.

Hazardous Substance: Any material that, because of its quantity, concentration, physical or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment.

Information Repository: A collection of documents about a specific project. Information on certain WQARF and Superfund sites may be available at ADEQ offices and libraries throughout the state.

Maximum Contaminant Level (MCL): The MCL is a federally-designated, enforceable drinking water standard set to ensure that water is safe for drinking and other uses. The MCL varies for each contaminant being analyzed.

Monitoring Wells (Monitor Wells): Wells installed for the purpose of collecting samples such as groundwater and soil gas. Analytical results from samples are used to characterize the extent of contamination, the direction of groundwater flow, and the types and quantities of contaminants present in the groundwater.

Plume: A well defined, usually mobile, area of contamination in groundwater, soil or the air. Often used to describe the dispersion of contamination in soil and/or groundwater.

Proposed Remedial Action Plan (PRAP): A document which reviews the cleanup alternatives presented in the site feasibility study and identifies ADEQ’s preferred alternative. Selection of a preferred alternative is not a closed-end commitment to use that alternative; rather, it is a way for

the agency to indicate, based on experience and expertise, which alternative is the most likely course of action. ADEQ must actively solicit public review of and comment on all the alternatives under consideration.

Public Comment Period: A period during which the public can formally review and comment on various documents and ADEQ actions.

Record of Decision (ROD): A legal document that announces and explains the cleanup methods ADEQ will use at a Superfund/WQARF site. The ROD is based on information and technical analysis generated during the remedial investigation and feasibility study, and on consideration of comments received during the public comment record for the proposed remedial action plan.

Remedial Action (RA): Any action taken to investigate, monitor, assess and evaluate the release or threat of release of hazardous substances or contaminants to the environment. It may also refer to the actual “cleanup” of the environment by various removal, treatment, monitored remediation, or corrective actions. The term cleanup is sometimes used interchangeably with the terms remedial action, removal action, response action, remedy, remediation, or corrective action.

Remedial Investigation (RI): Establishes the nature and extent of the contamination and the sources; identifies current and potential impacts to public health, welfare, and the environment; identifies current and reasonable foreseeable uses of land and waters of the state; and obtains and evaluates any information necessary for identification and comparison of alternative remedial actions.

Remedial Objective (RO): Established remedial goals for the current and reasonably foreseeable uses of lands and waters of the state that have been or are threatened to be affected by a release of hazardous substance.

Remediation: Cleanup or other methods used to remove or contain a toxic spill or hazardous materials.

Responsible Parties (RPs): Those parties (individuals, corporations) identified by state or federal authorities as liable for cleanup costs at a contaminated site.

Responsiveness Summary: A summary of oral and written comments (and ADEQ responses to those comments) received during the public comment period.

Soil Vapor Extraction (SVE): A commonly used technique for cleaning up contaminated soils. This process physically separates contaminants from soil in a vapor form by exerting a vacuum through the soil formation; removes volatile and semi-volatile organic compounds from the ground surface.

Solvent: A substance, usually a liquid, which is capable of dissolving or dispersing one or more other substances. PCE is a common solvent used in the dry cleaning business and in cleaning auto and airplane parts.

Tetrachloroethene or Tetrachloroethylene or Perchloroethene (PCE): A clear, colorless, liquid with a chloroform or sweet odor and a low boiling point; a solvent used for dry-cleaning; degreasing and drying metals and other solids; dissolving waxes, greases, oils, fats, and gums, and in other industrial applications. PCE is a potential occupational carcinogen. Evaporation of PCE increases as temperature increases.

Trichlorethane (TCA): A colorless liquid with a sharp, sweet odor. It is a chlorinated solvent similar to TCE and used mainly for the degreasing/drying of metals and electronic components. It is found in building materials, cleaning products, paints, and metal degreasing agents.

Trichloroethene or Trichloroethylene (TCE): A colorless liquid used as a solvent, metal degreasing agent, and in other industrial applications.

Volatile Organic Compounds (VOCs): A large group of carbon-containing compounds that are easily dissolved into water, soil, or the atmosphere and evaporate readily at room temperature. Examples of VOCs include tetrachloroethene, trichloroethene, benzene, toluene, ethylbenzene and xylene (BTEX). These contaminants are typically generated from metal degreasing, printed circuit board cleaning, gasoline, and wood preserving processes.

Water Quality Assurance Revolving Fund (WQARF): Also known as the State Superfund. WQARF is the program and funding which is used to address hazardous substance releases within the state that are not covered by other specific programs.

K. Site Fact Sheets

Shown below is the list of Fact Sheets that have been sent to the community. Beginning on the next page are copies of the original Fact Sheets that were sent. These copies have been scanned from older original documents. If you need a hard copy of the original, please contact the Community Involvement Coordinator.

1. *Interim Soil Cleanup To Start At The Layke, Inc. Facility, Fall 1994*
2. *Introductory Fact Sheet, Winter 1994 (English and Spanish)*
3. *Update on the F&B Mfg. Co. and Other Investigations, Summer 1994 (English and Spanish)*
4. *Update on Investigations at the Former Rinchem and Van Waters & Rogers Facilities, Summer 1995*
5. *Update on the West Osborn Complex, Spring 1996*
6. *Update on the West Osborn Complex Phase I Remedial Investigation, Summer 1997*
7. *Update on Your Environment, April 2000 (English and Spanish)*
8. *West Central Phoenix WQARF Area News, March 2001*
9. *West Central Phoenix WQARF Sites Update, September 2004*
10. *West Central Phoenix WQARF Sites Update Fact Sheet, February 2007*



Fall '94

ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY THE WEST CENTRAL PHOENIX STATE SUPERFUND PROJECT AREA

INTERIM SOIL CLEANUP TO START AT THE LAYKE, INC. FACILITY

For several years, the Arizona Department of Environmental Quality (ADEQ) has been investigating soil and groundwater pollution from industrial solvents in the West Central Phoenix Project Area. ADEQ has been working with property owners or businesses conducting the investigations at the properties. This newsletter is about the investigations conducted at the Layke, Inc. (Layke) facility, under ADEQ's supervision, and the interim cleanup actions Layke will be starting at the facility during the coming weeks (See Figure 1).

WHAT HAVE THE INVESTIGATIONS AT LAYKE FOUND?

The chemical trichloroethylene (TCE) has been found in soil and groundwater. The concentrations of TCE found in the groundwater beneath the facility are higher than health standards set by the U.S. Environmental Protection Agency (EPA) and the state of Arizona.

Chemicals used at Layke have included solvents such as TCE and various oils. Reportedly, waste oils and solvents were stored in 55-gallon drums, while the waste water-soluble oils were stored in an underground storage tank (UST) (See Figure 2 on page 2).

In 1989, ADEQ conducted soil and soil-gas sampling at Layke. After this investigation, a UST leak

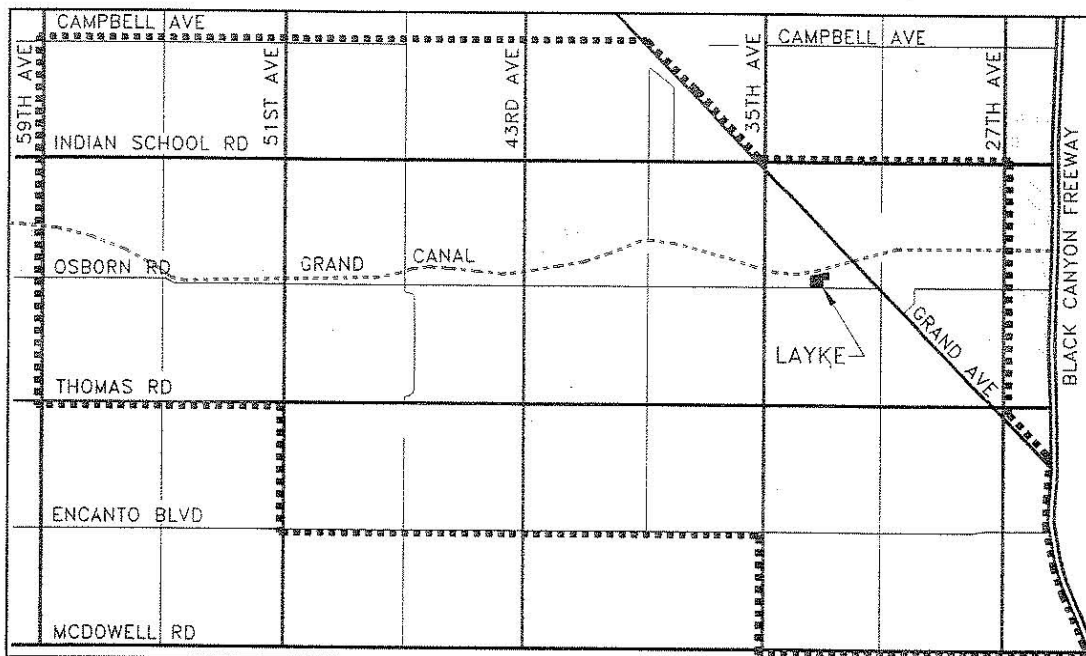


Figure 1: The map shows the boundaries of the West Central Phoenix Project Area and the location of the Layke, Inc. facility.

WHAT DOES LAYKE MANUFACTURE?

Layke makes parts for aircraft, aerospace, electronic and other industries.

Layke has been located at 3330 West Osborn Road since 1967 and currently employs 25 persons. Layke manufactures parts for industries using precision machining equipment.

was suspected at the facility because the soil-gas testing indicated the presence of TCE near the UST. Layke used TCE as a degreasing agent from 1975 until 1983.

In 1990, following a request by ADEQ, Layke removed the UST and collected soil samples from the excavation and from seven soil borings completed near the former UST. TCE concentrations ranged from less than 1 milligram per kilogram

(mg/Kg) to 230 mg/Kg. It appears that the UST became contaminated with TCE and overflowed, contaminating soil with TCE as well as waste oil (petroleum).

In 1992, ADEQ installed a monitor well at Layke near the location of the former UST.

Groundwater samples from a monitor well near Layke's UST have shown TCE concentrations as high as 420 µg/L... higher than the level at which TCE is considered safe in drinking water.

Groundwater samples from the well have shown concentrations of TCE of up to 420 micrograms per liter (µg/L). The Maximum Contaminant Level (MCL) for TCE - the concentration at which TCE is considered safe in drinking water - is 5 µg/L.

WHAT IS LAYKE PLANNING TO DO AT ITS FACILITY?

Layke, under ADEQ's supervision, will start an interim soil cleanup program at the Layke facility in the next coming weeks.

In 1992, Layke conducted a soil vapor extraction (SVE) test. The test indicated that SVE is a good technology for removing the contaminants from soils at the facility. Layke used the test results to design a full-scale SVE system for the facility. The full-scale SVE system consists of three SVE wells; an air blower, which is used to extract air from the wells; a moisture separator; inlet filter; air silencer; exhaust stack; valves to control air flow; and gauges that show pressure, temperature and air flow from the system (See Figure 3 on page 3).

The SVE system will soon be installed by Layke. Following installation, equipment will be tested, air samples will be collected and the system will be put into operation. The system will be monitored to evaluate the amount of pollution being removed. Periodic progress reports will be issued, and ADEQ will monitor the progress of the interim soil cleanup.

Tests indicated that SVE is a good technology for removing contamination from the soils at Layke.

When the TCE and petroleum hydrocarbon concentrations in the soil vapors have been reduced, soil tests will be conducted to determine the TCE and petroleum concentrations remaining in the soil. At this point, a Risk Assessment will be conducted to determine what else must be done. Reducing the TCE and petroleum hydrocarbon contamination from soils at the facility should take about 18 months. ADEQ intends to have Layke reimburse the state for oversight costs.

In addition to this interim soil cleanup, ADEQ continues to investigate the groundwater contamination in the West Central Phoenix Project Area and at the Layke facility.

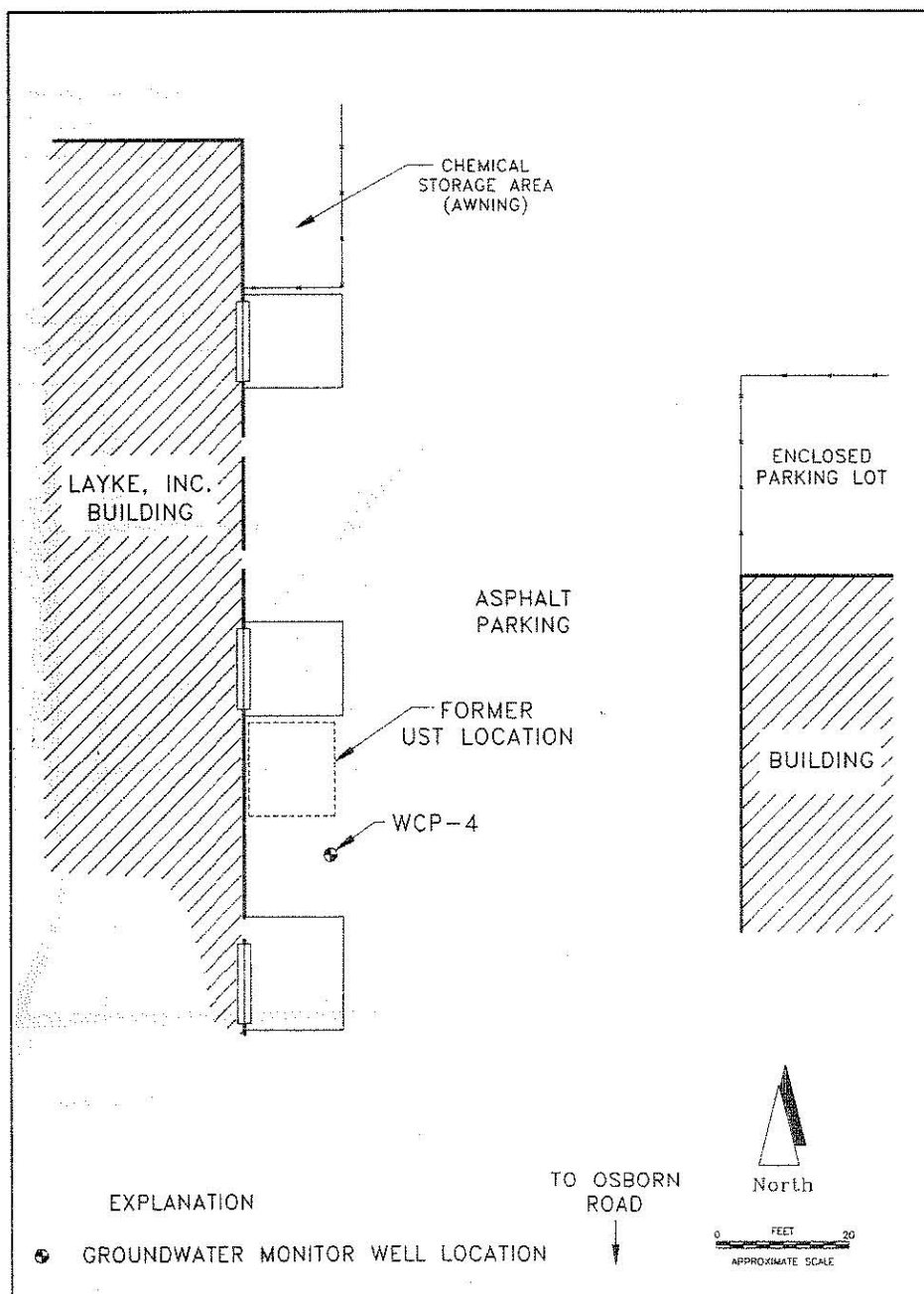


Figure 2: This diagram shows the Layke facility and the location of the monitor well installed by ADEQ.

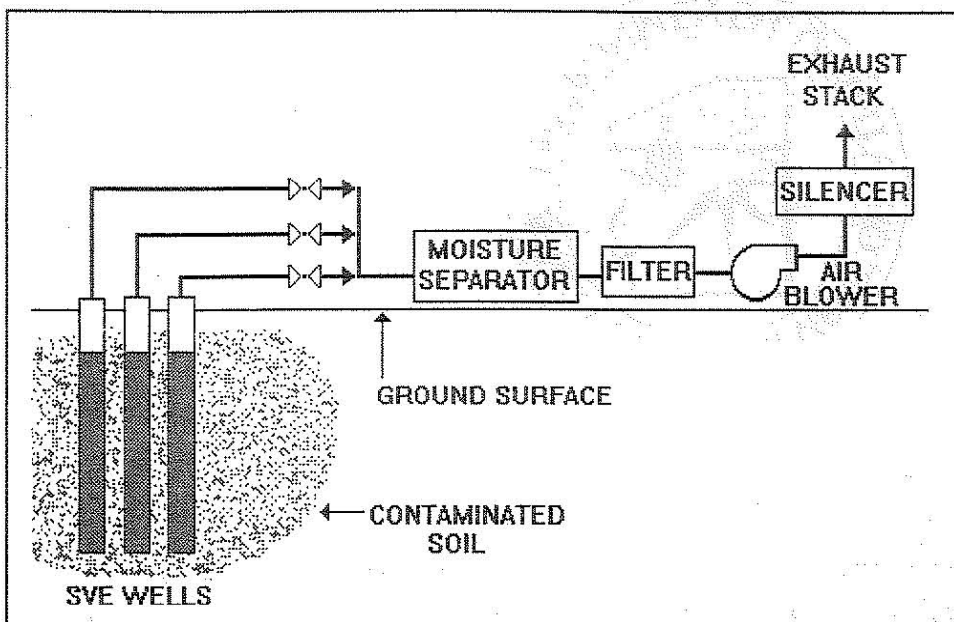


Figure 3: The diagram shows a generalized soil vapor extraction (SVE) system. Vapors are removed from the ground through the SVE wells and passed through the moisture separator and carbon filter. Contaminants are captured by the carbon filter. Clean air is then released through the exhaust stack.

FOR MORE INFORMATION:

You can review documents related to the West Central Phoenix Project Area at:

Arizona Department of
Environmental Quality
File Coordinator
3033 N. Central Ave.
Seventh Floor
Phoenix, Arizona 85012
(602) 207-4190.

Open: Mon. - Fri. 8 a.m. - 5 p.m.

Or call the Arizona Department of
Environmental Quality Superfund
Hotline at 207-4360. You also may
call Ana Vargas, project manager, at
207-4178.

GLOSSARY

Aquifer: Water-bearing soil or rock beneath the ground's surface that can store and supply groundwater to wells and springs.

Cleanup: Actions taken that deal with a release or threat of a release of a hazardous substance that could affect people or the environment. The term "cleanup" is sometimes used interchangeably with the terms remedial action, removal action, response action, remedy, remediation or corrective action.

Cost Recovery: A legal process where responsible parties can be required to pay back the state for money it spends on any investigative and/or cleanup actions.

Facility: Under federal law, the term "facility" includes any place, site or area where a hazardous substance has been deposited, stored, disposed of, placed or otherwise came to be located.

Groundwater: Water found beneath the earth's surface that fills pores between materials such as sand, clay or gravel. In aquifers, groundwater occurs in sufficient quantities that it can be used for drinking water, irrigation and other purposes.

Maximum Contaminant Level (MCL): The maximum permissible level of a contaminant in water delivered to any user of a public water system. MCLs are enforceable standards.

Micrograms Per Liter (µg/L)/Parts Per Billion (ppb): Units commonly used to express low concentrations of contaminants. For example, 1 ounce of TCE in one billion ounces of water is 1 µg/L or ppb. If one drop of TCE is mixed in a competition-size swimming pool, the water will contain about 1 µg/L or ppb of TCE.

Monitoring wells: Special wells drilled at specific locations on or off a site where groundwater can be sampled at selected depths and studied to determine such things as the direction in which groundwater flows and the types and amounts of contaminants present.

Risk Assessment: An evaluation performed in an effort to define the risk posed to human health and/or the environment by the presence or potential presence and/or use of specific pollutants.

Soil Vapor Extraction (SVE): Soil vapor extraction is a commonly used technique for cleaning up contaminated soils. Soil vapor extraction draws air through contaminated soils and the contaminants are transferred to the air. The contaminated air is then treated or discharged, depending on the amount and type of contamination present.

SVE Well: Special wells drilled to a depth where solvent or petroleum fuel contamination exists. The SVE wells capture the vapors from the contaminants, resulting in soil cleanup.

MAILING LIST COUPON—WEST CENTRAL PHOENIX PROJECT

If you would like to receive future updates about the West Central Phoenix Project, please return this coupon and you will be added to the project's mailing list.

Name: _____ Telephone: _____

Address: _____

Organization /Affiliation (if any): _____

Return to: Ana Vargas, ADEQ, 3033 North Central Avenue, Phoenix, AZ 85012

The Arizona Department of Environmental Quality shall preserve, protect and enhance the environment and public health and shall be a leader in the development of public policy to maintain and improve the quality of Arizona's air, land and water resources.

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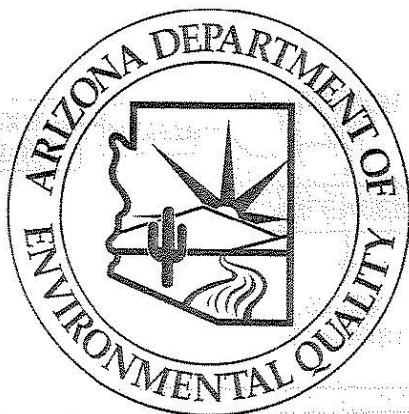


Public Affairs
Arizona Department of Environmental Quality
3033 North Central Avenue
Phoenix, Arizona 85012

OFFICIAL NOTICE STATE OF ARIZONA

If you have a well in your backyard or somewhere else on your property, or know of a private well in the area of the groundwater pollution discussed in this fact sheet, and you suspect that it is not registered with the Department of Water Resources, please call 207-4360.

You may leave a message in English or Spanish. Someone will call you back as soon as possible.





Winter '94

*Este documento
se puede obtener
en español
llamando a
Superfund
Hotline
al 207-4360.*

**You're
Invited
To An
Open House
To Learn
More:**

**Tuesday,
February 8
5:30-8:30 p.m.
See
page 6.**

ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY THE WEST CENTRAL PHOENIX STATE SUPERFUND PROJECT AREA

INTRODUCTORY FACT SHEET

Because of pollution caused by past industrial practices in this area, work to treat contamination of underground water supplies is under way.

Years of industrial activity in West Central Phoenix have left pollution that could potentially pose a threat to human health and the environment. Several plumes of contamination containing industrial solvents have been detected in the area's underground aquifer, or water source.

Work is ongoing to identify hazardous substances in groundwater and soil, to find out where it has come from, and to evaluate risk to public health and the environment.

In 1987, West Central Phoenix was made a state Superfund site under the Arizona Water Quality Assurance Revolving Fund (WQARF). That makes the area eligible for state funds as needed to address the problem. (Sometimes use of state funds is unnecessary when industries volunteer to do the work themselves.)

Work in the West Central Phoenix area is done under the supervision of scientists and engineers from the Arizona Department of Environmental Quality (ADEQ).

WHAT ARE THE BOUNDARIES OF THE WEST CENTRAL PHOENIX SUPERFUND SITE?*

The study area covers about nine square miles in West Central Phoenix.

The study area is bounded by Campbell and Indian School Roads to the north, 27th Avenue and Interstate Highway 17 (the Black Canyon Freeway) to the east, McDowell and Encanto Roads to the south and 59th Avenue to the west. *This is the area where the investigation for groundwater pollution is being conducted. These are not specific boundaries of contamination.*

**See map on page 3.*



Drilling of a monitor well in the West Central Phoenix area. Monitor wells are installed to determine such things as the direction in which groundwater flows and the types and amounts of contaminants present.

WHEN WAS THE POLLUTION DISCOVERED?

In 1982.

Contamination in the area was first detected in the groundwater in July 1982. The City of Phoenix found the chlorinated cleaning solvent trichloroethylene (TCE) in four city water supply wells in the West Central Phoenix area. The two wells with the highest concentrations of TCE were shut down in 1982. Monitoring continued on the other two wells to make sure that they met safe drinking water standards. The City of Phoenix closed the last two wells in 1989.

After the initial discovery, extensive groundwater sampling in the West Central Phoenix area was conducted by the Arizona Department of Health Services (ADHS), the City of Phoenix and Salt River Project. The sampling verified the presence of chlorinated solvents in city wells and irrigation wells in the West Central Phoenix area.

In 1984, when ADEQ investigated contamination in one of the City of Phoenix wells, a survey was taken of more than 400 area businesses that might have stored, handled or disposed of hazardous substances. Based on that investigation, it was determined that the contamination came from several sources. In 1987, West Central Phoenix was placed on the State Superfund (WQARF) priority list.

The Arizona Department of Environmental Quality has done extensive soil and soil gas sampling, installed monitoring wells and conducted sampling and analysis of groundwater in the West Central Phoenix area. Identifying the exact sources of the contamination and the extent of the contaminated groundwater has been a major task.

IS DRINKING WATER SAFE?

Yes.

Contamination at the West Central Phoenix Superfund site does not pose a threat to currently-used drinking water supplies in the area. Residents and businesses are served by City of Phoenix drinking water. City drinking water is supplied by surface water and groundwater from other areas in the Phoenix metropolitan area, and not by West Central Phoenix groundwater.

Groundwater contamination poses a long-term threat to future drinking water supplies and must be treated to keep it from spreading. For that reason, ADEQ is working to investigate, control and clean up contamination in the West Central Phoenix area through the State Superfund (WQARF) process.

*Contamination
at the West Central Phoenix
Superfund site does not
pose a threat to currently-used
drinking water supplies
in the area.*

*Testing so far at
the West Central Phoenix
site indicates almost
no chance of human contact
with the contamination.*

WHAT DO WE KNOW ABOUT THE GROUNDWATER POLLUTION HERE?

*The contamination is caused by industrial
solvents that were commonly used in the
past.*

Groundwater sampling and analysis have primarily detected trichloroethylene (TCE), tetrachloroethylene (PCE) and 1,1-dichloroethylene (1,1-DCE) in the West Central Phoenix area. TCE and PCE are industrial solvents used commonly in the past, while 1,1-DCE results in the breakdown of the other two chemicals.

Four general areas with plumes of contamination have been found north and south of the Grand Canal. Concentrations of TCE, PCE and 1,1-DCE there exceed health standards set for drinking water by the U.S. Environmental Protection Agency (EPA) and the state of Arizona. Those standards are called Maximum Contaminant Levels, or MCLs. TCE is the most wide-

spread or common contaminant found in the groundwater in this area as well as most areas of groundwater contamination throughout metropolitan Phoenix.

The maximum contaminant level (MCL), or safe level for TCE in drinking water is 5 parts per billion (ppb). One ppb is roughly equivalent to a drop of water in an Olympic-sized swimming pool.

So far, two facilities have been identified as sources of groundwater contamination north of the Grand Canal: the Osborn Products, Inc. and F & B Mfg. Co. facilities. ADEQ is researching other sources of contamination in the area.

South of the Grand Canal, two other plumes have been found. Contamination in these two areas came from two facilities: the West Osborn Complex and Layke, Inc. Work by ADEQ scientists also is under way there to identify other sources of contamination.

IS THERE ANY HEALTH RISK FROM THE CONTAMINANTS IN THIS AREA?

Probably not.

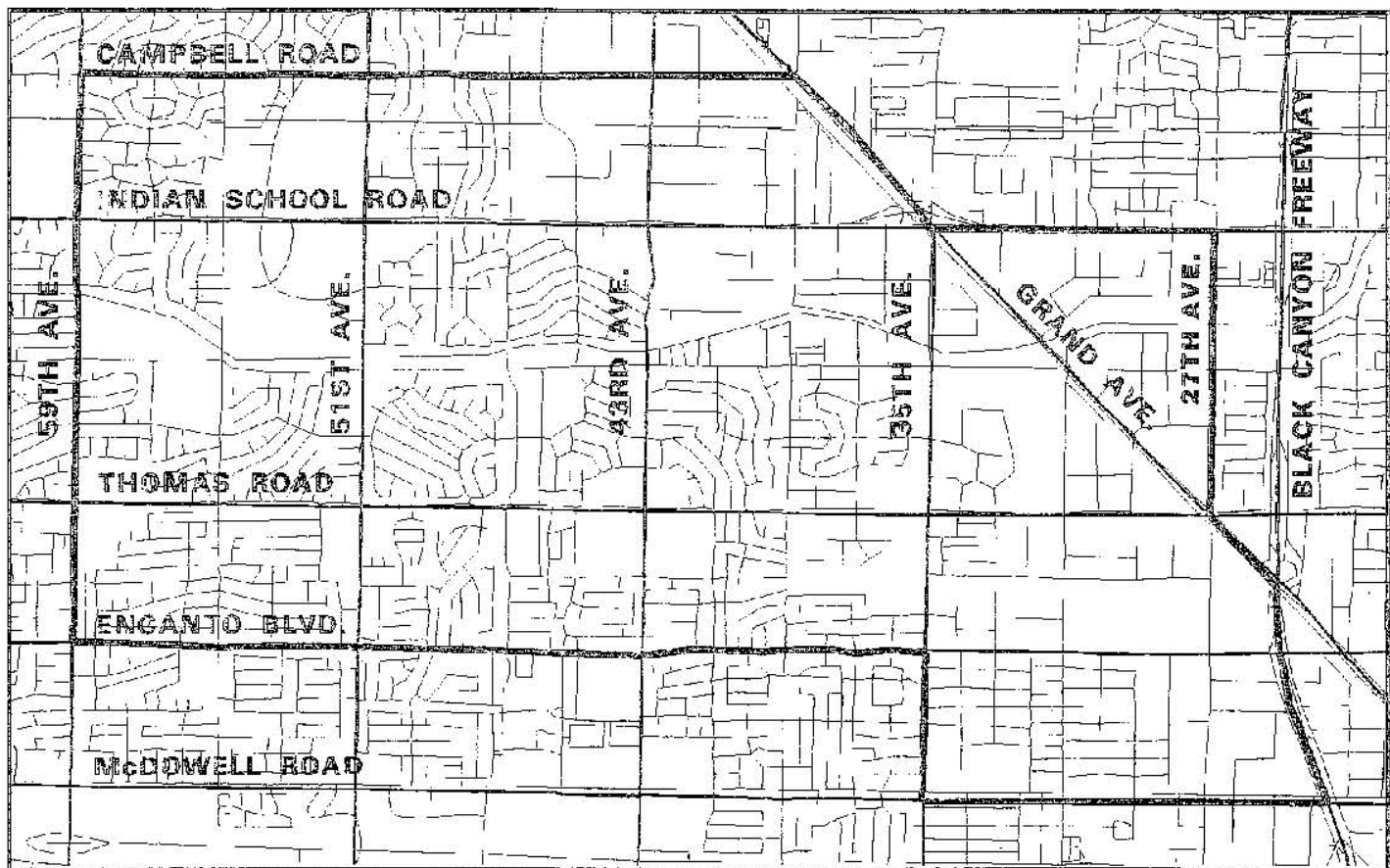
*Research has found no
link between groundwater
contamination and cases of
cancer in the West Central
Phoenix area.*

Testing so far at the West Central Phoenix site indicates almost no chance of human contact with 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. People could be exposed to contaminated well water if they drank it or washed with it, but the contaminated wells in the area have been shut down. They are no longer used for either irrigation or drinking water.

Although there is very little chance people will have contact with the contami-



nants, ADHS will conduct Health Risk Assessments at facilities conducting Remedial Investigations/ Feasibility Studies (RI/FSS) in the West Central Phoenix area to evaluate potential health risks. These contaminants are classified as probable human carcinogens because some studies have shown they cause cancer in some animal species. However, we do know that exposure to high concentrations of chemicals, such as in a workplace setting, can cause adverse health effects.

WHAT ABOUT THE RISK OF CANCER IN THIS AREA?

Research has found no link between groundwater contamination and cases of cancer in the West Central Phoenix area.

The question of a possible connection between groundwater contamination and

the so-called Maryvale "cancer cluster" first was raised in the 1980s. The issue came up after reports of a higher-than-average number of childhood leukemia cases in a local school.

ADHS research found slightly higher rates of childhood leukemia in West Central Phoenix compared to the rest of Maricopa County between 1965 and 1986. A more recent study by ADHS covering the period from 1987 to 1990 showed that the rates no longer were elevated. Research conducted to date by several agencies has shown no association with groundwater contamination.

A case control study is currently being conducted by ADHS. This research will determine if environmental factors may be associated with the previously elevated childhood leukemia rates in West Central Phoenix. The study is expected to be completed in 1994.

WHAT IS BEING DONE NOW?

Work is under way to treat soil and groundwater contamination.

ADEQ has so far identified four facilities that caused contamination. We are working to find others. The Responsible Parties associated with these facilities are liable under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), or federal Superfund law. Under that law, passed in 1980, they are financially responsible for the costs of investigating and cleaning up the pollution. The four known facilities are:

F&B Mfg. Co. Facility:

This facility is located at 4376 N. 39th Avenue. PCF was used there in a degreasing process from 1966 to 1987. Soil samples in

the area have detected high concentrations of PCE.

In October 1992, F&B installed a monitoring well to assess the impact of the PCE on groundwater. Sampling from this well showed concentrations of PCE ranging from 710 parts per billion (ppb) to 110,000 ppb. The maximum contaminant level (MCL) for PCE in drinking water is 5 ppb.

Under a legal agreement filed in Federal District Court in November 1992 to address the problem, F&B agreed to conduct an RI/FS, clean up contaminated soil at the facility and reimburse the state's past and future investigative costs.

As a result of this agreement, a Community Relations Plan was developed. The plan establishes a technical committee for the site with representatives from ADEQ, ADHS, the Arizona Department of Water Resources (ADWR), the Salt River Project (SRP), the City of Phoenix and F&B Mfg. Co. The committee will coordinate work at the F&B facility and in the West Central Phoenix area.

Thus far, F&B has installed three monitoring wells, and a fourth well is expected to be completed and sampled by February 1994. F&B has also conducted soil sampling at the property.

West Osborn Complex Facility:

This facility at 3536, 3600 and 3640 W. Osborn Road is a source of the TCE found in groundwater in the area. Several companies manufactured capacitors, diodes and semiconductor parts at the facility from 1958 through 1974. The facility was subdivided into three parcels sold between 1976 and 1978.

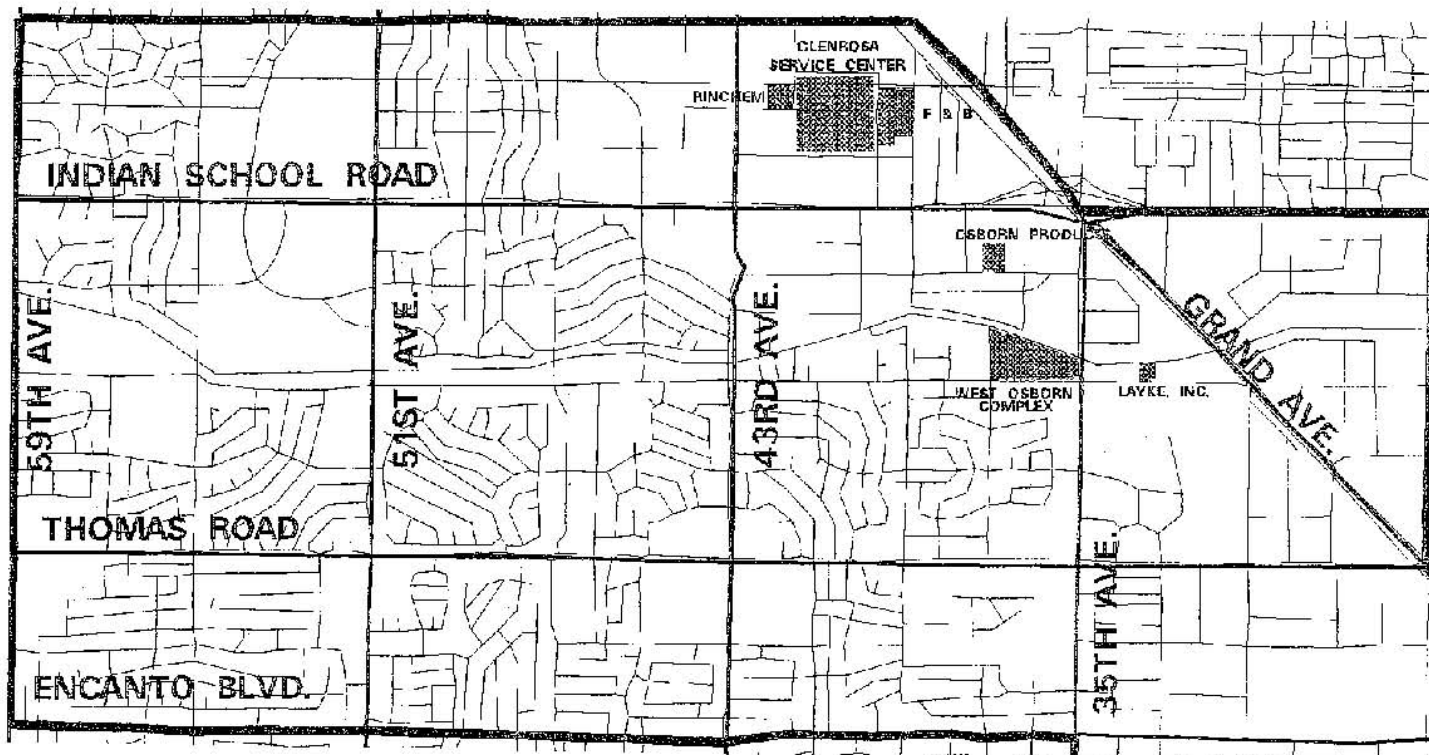
Septic tanks and seepage pits apparently were used for disposal of TCE and other industrial wastes. TCE also was disposed of onto the ground.

In 1992, five monitoring wells were installed to assess the groundwater contamination under the facility. Groundwater sampling has found concentrations of TCE ranging from 1,200 ppb to 1,600 ppb. PCE

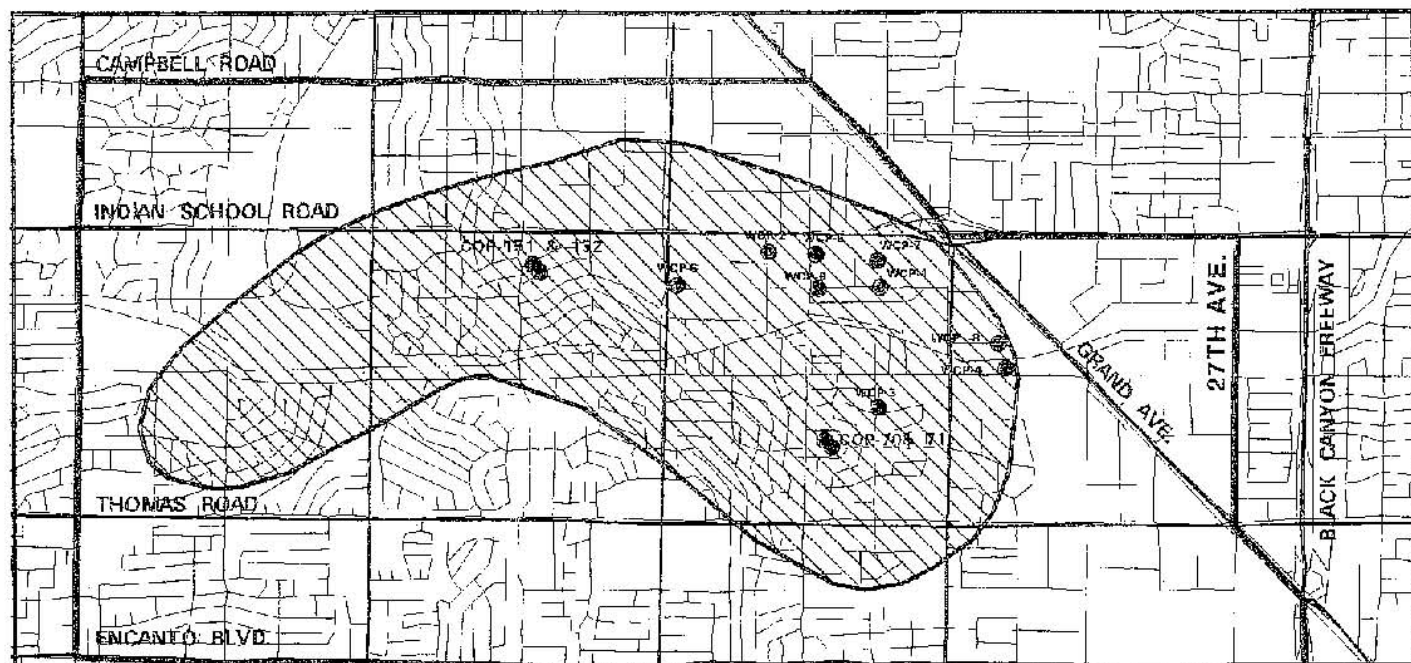
has been detected in concentrations ranging from 14 ppb to 61 ppb. Concentrations of 1,1-DCE ranging from 190 ppb to 260 ppb have also been detected. The maximum contaminant level (MCL) for 1,1-DCE is 7 ppb.

In July 1991, a legal settlement was reached between ADEQ and Nucor Corp., one of the firms formerly housed at the West Osborn Complex. As part of the settlement, Nucor agreed to pay \$1.275 million for their contribution to groundwater contamination in the West Central Phoenix area. The Court Order approving the settlement was signed in September 1993. A court appeal has stalled payment of that settlement.

In May 1993, ADEQ filed a court action against United Industrial Corporation, another firm formerly housed at the West Osborn Complex. The action was filed pursuant to Section 107 of CERCLA, with state claims for injunctive relief to force the company to clean up the site and pay back the state for costs incurred at the site.



The map shows the boundaries of the West Central Phoenix area, facilities known to be sources of the contamination, and other facilities currently under investigation.



The map shows the approximate extent of the contaminated groundwater and locations of monitor wells and municipal drinking water wells. Although other types of contamination have been detected, trichloroethylene (TCE), an industrial solvent, is the most widespread contaminant.

Layke, Inc. Facility:

Located at 3330 W. Osborn Road, this facility has operated since 1967. Layke, Inc. makes parts for the aircraft, aerospace, electronic and other industries.

The firm used TCE as a degreasing agent from 1975 until 1983. A waste oil underground storage tank became contaminated with TCE and overflowed. Soil and groundwater were then contaminated with TCE. A monitor well installed at the facility showed a TCE concentration of 420 ppb in groundwater, which is above the MCL for TCE of 5 ppb. The tank has since been removed.

Layke, Inc. plans to install a soil vapor extraction system to treat contaminated soils near the former site of the tank and to install three wells for monitoring groundwater contamination. ADEQ also intends to recover money spent on this facility.

Osborn Products, Inc. Facility:

Located at 3632 W. Clarendon Avenue and now vacant, this facility operated from 1956 to 1984. Osborn Products currently

operates at a facility in North Phoenix. While Osborn Products operated at the facility, it was a chrome plating shop and a machine shop for aerospace parts. TCE was used for cleaning parts.

Apparently, waste solvents were disposed of into above-ground storage tanks and into drywells at the facility. Soil samples collected around the drywells in 1984 by ADHS detected TCE and other chemicals. The drywells were closed in 1986.

In 1992, ADEQ installed two groundwater monitoring wells. TCE concentrations ranged from 19 ppb to 320 ppb, which is above the MCL for TCE of 5 ppb.

ADEQ plans more research at the Osborn Products facility.

OTHER INVESTIGATIONS

Several other potential sources of contamination are under investigation.

The Arizona Department of Environmental Quality has completed a report on monitor well sampling near the City of Phoenix Glendale Service Center in the area north of Indian School Road, between

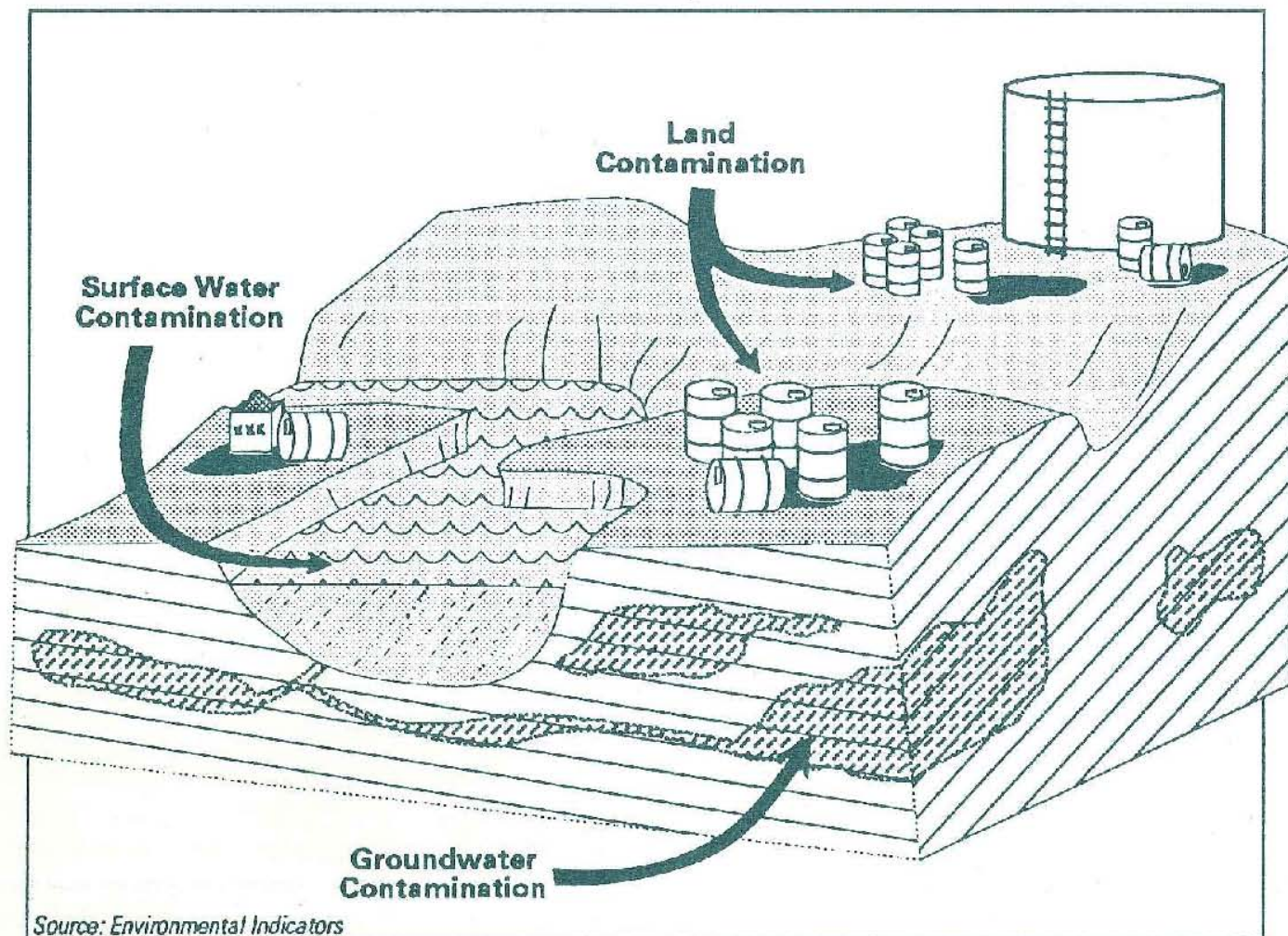
40th and 43rd Avenues. Monitor wells near the facility have been sampled by ADEQ since 1989. TCE, PCE and 1,1-DCE contamination have been detected. This report indicates that other facilities in the area, in addition to the F&B facility, may be sources of the groundwater contamination in this area.

The former Rinchem facility in the vicinity of the City of Phoenix Glendale Service Center is among facilities under investigation in this area. In another voluntary effort, the property owners will be working under the supervision of engineers and scientists from ADEQ. This work plan is currently under review.

ADEQ has conducted investigations of dozens of facilities throughout this area and is continuing to look for other facilities that could be possible sources of the contamination.

WHAT EFFECT DOES THIS HAVE ON MY PROPERTY?

Under Arizona law, residential property owners are not responsible for cleanup



Source: Environmental Indicators

This figure illustrates the land, groundwater and surface water pathways of contamination that are typically investigated during a Remedial Investigation/Feasibility Study (RI/FS).

costs of pollution on or beneath their property that migrated from off-site. EPA also has an informal policy of not holding residential property owners liable for such contamination.

A Realtor in the state of Arizona is obligated by law to disclose any material fact known to the seller that may influence a decision to buy a home. The fact that a home is located at a Superfund site might be considered a material fact. Generally speaking, if groundwater contamination causes no adverse problems at the surface, it should have no effect on the value of the property.

FOR MORE INFORMATION.

You can review documents related to the West Central Phoenix WQARF site at:

Arizona Department of
Environmental Quality
WQARF File Coordinator
3033 N. Central Ave., Fifth Floor
Phoenix, Arizona 85012
(602) 207-4190
Open: Mon.—Fri. 8 a.m.—5 p.m.

Or call the Arizona Department of
Environmental Quality Superfund Hotline
at 207-4360.

If you have questions about the health
effects of the contaminants found in the
groundwater, please call the Arizona
Department of Health Services at 542-7310.

YOU'RE INVITED TO AN OPEN HOUSE TO LEARN MORE:

Tuesday, February 8
5:30-8:30 p.m.

Maryvale High School Cafeteria
3415 N. 59th Avenue

Scientists and engineers from the
Arizona Department of Environmental
Quality and the Arizona Department of
Health Services will be on hand to talk
with you and answer any questions
you may have.

(Note: A Spanish translator available.)

GLOSSARY

Aquifer: Water-bearing soil or rock beneath the ground's surface that can store and supply groundwater to wells and springs.

CERCLA: Comprehensive Environmental Response, Compensation, and Liability Act or "Superfund." CERCLA, also known as the federal "Superfund" law, was passed in 1980. CERCLA established a program to (1) identify sites where hazardous substances have been, or might be, released into the environment; (2) ensure that these sites are cleaned up by the responsible parties or the government; (3) evaluate damages to natural resources; and (4) create a claims procedure for parties who have cleaned up sites to recover their costs from a responsible party or parties.

Cleanup: Actions taken that deal with a release or threat of a release of a hazardous substance that could affect people or the environment. The term "cleanup" is sometimes used interchangeably with the terms remedial action, removal action, response action, remedy, remediation, or corrective action.

Cost Recovery: A legal process where responsible parties can be required to pay back the state for money it spends on any investigative and/or cleanup actions.

Drywell: A bored, drilled or driven shaft or hole whose depth is greater than its width and which is designed and constructed specifically for the disposal of storm water.

Facility: Under CERCLA, the term "facility" includes any place, site, or area where a hazardous substance has been deposited, stored, disposed of, placed, or otherwise came to be located.

Groundwater: Water found beneath the earth's surface that fills pores between materials such as sand, clay or gravel. In aquifers, groundwater occurs in sufficient quantities that it can be used for drinking water, irrigation and other purposes.

Hazardous Substance: Any element, compound, mixture, solution, or substance listed as a "hazardous substance" under CERCLA.

Under CERCLA, tetrachloroethylene (PCE), trichloroethylene (TCE), and 1,1-dichloroethylene (1,1-DCE) are listed hazardous substances.

Maximum Contaminant Level (MCL): The maximum permissible level of a contaminant in water delivered to any user of a public water system. MCLs are enforceable standards.

Monitoring wells: Special wells drilled at specific locations on or off a site where groundwater can be sampled at selected depths and studied to determine such things as the direction in which groundwater flows and the types and amounts of contaminants present.

Plume: Describes the shape of the contaminant discharge in the groundwater, determined by the sampling of monitoring wells.

Responsible Party (RP): Those parties identified by ADEQ as liable under CERCLA for cleanup costs. RPs may include generators and present or former owners/operators of certain facilities or real property where hazardous substances have been stored, treated, and/or disposed of. PRPs are Potentially Responsible Parties.

Remedial Investigation/Feasibility Study

(RI/FS): A two-phase investigation conducted by RPs or ADEQ to investigate the scope of contamination (RI) and determine the remedial alternatives (FS) which may be implemented to cleanup the site. A RI/FS requires extensive technical studies that may include soil and groundwater sampling and analysis both on the property and in adjoining areas that also may be contaminated. The objective of the RI/FS is to gather sufficient data to evaluate and select the most appropriate cleanup alternative for the site.

WQARF: Water Quality Assurance Revolving Fund. A program established by the Arizona State legislature to (1) perform statewide surface and groundwater quality monitoring; (2) perform health effects studies, including epidemiological studies and risk assessments; (3) perform emergency remedial actions; and (4) conduct long-term remedial action programs. The WQARF program is funded with state monies, civil and criminal penalties, and funds recovered from RPs.

MAILING LIST COUPON

WEST CENTRAL PHOENIX PROJECT

If you would like to receive future updates about the West Central Phoenix Project, please return this coupon and you will be added to the project's mailing list.

Name: _____ Telephone: _____

Address: _____

Organization/Affiliation (if any): _____

Return to: Ana Vargas, ADEQ, 3033 North Central Avenue, Phoenix, AZ 85012

OFFICIAL NOTICE STATE OF ARIZONA

*If you have a well in your backyard or somewhere else on your property,
or know of a private well in the area of the groundwater pollution and you suspect that
it is not registered with the Department of Water Resources, please call 207-4360.*

*You may leave a message in English or Spanish. Someone will
call you back as soon as possible.*

**YOU'RE INVITED
TO AN OPEN HOUSE
TO LEARN MORE:**

Tuesday, February 8
5:30-8:30 p.m.

See inside for details.



Public Affairs
Arizona Department of Environmental Quality
3033 North Central Avenue
Phoenix, Arizona 85012



Bulk Rate
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Permit # 1682

*Este documento se puede
obtener en español llamando
a Superfund Hotline al
207-4360.*



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The Arizona Department of Environmental Quality shall preserve, protect and enhance the environment and public health, and shall be a leader in the development of public policy to maintain and improve the quality of Arizona's air, land and water resources.



Invierno '94

**Usted Está
Invitado A Una
Junta de la
Comunidad:**

**martes, 8 de
febrero de 1994
5:30-8:30 p.m.
Cafetería Escuela
Secundaria
de Maryvale
3415 al norte de
la Avenida 59**

**Científicos e
ingenieros del
Departamento de
Calidad Ambiental
y del
Departamento de
Servicios de Salud
de Arizona estarán
disponibles para
hablar con usted
y contestar sus
preguntas.**

**(Nota: Un traductor
estará disponible).**

DEPARTAMENTO DE CALIDAD AMBIENTAL DE ARIZONA EL PROYECTO DEL ÁREA CENTRAL OESTE DE PHOENIX DEL SUPERFONDO ESTATAL

HOJA DE INFORMACIÓN INTRODUCTORIA

Se está llevando a cabo una investigación para tratar la contaminación del agua subterránea que existe en el área debido a actividades industriales en el pasado.

Años de actividad industrial en el Área Central Oeste de Phoenix ha causado una contaminación que puede representar un riesgo para la salud humana y el medio ambiente. Disolventes industriales han sido detectados en varias zonas del acuífero subterráneo o fuente de agua.

Se está llevando a cabo una investigación para: (1) identificar cuáles son las sustancias peligrosas que se encuentran en el agua subterránea y el terreno; (2) averiguar el origen de las sustancias; y (3) evaluar los riesgos a la salud pública y el medio ambiente.

En 1987, el Área Central Oeste de Phoenix se convirtió en un área de estudio bajo la ley del Fondo Giratorio Para La Seguridad De La Calidad De Agua (WQARF) o Superfondo Estatal. Esto permite que el área sea elegible para obtener los fondos estatales necesarios para bregar con el problema. (Algunas veces, el uso de fondos estatales no es necesario cuando industrias conducen investigaciones voluntariamente.)

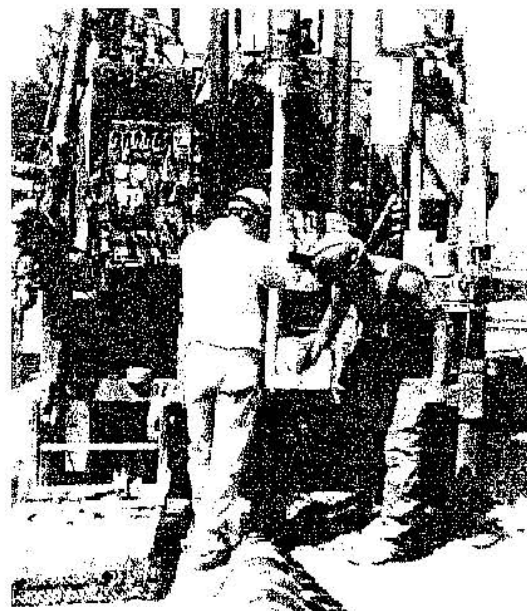
La investigación en el Área Central Oeste de Phoenix es conducida bajo la supervisión de científicos e ingenieros del Departamento de Calidad Ambiental de Arizona (ADEQ).

¿CUÁLES SON LOS LÍMITES DEL ÁREA CENTRAL OESTE DE PHOENIX?*

El área bajo estudio cubre aproximadamente nueve millas cuadradas.

El área bajo estudio está limitada en el norte por las Calles Campbell e Indian School, en el este por la Avenida 27 y la Carretera Interestatal 17 ("Black

*Vea el mapa en la página 3.



Perforación de un pozo de observación en el Área Central Oeste de Phoenix. Los pozos de observación son instalados para determinar cosas como la dirección del flujo del agua subterránea, y los tipos y cantidades de contaminantes presentes.

Canyon Freeway"), en el sur por las Calles McDowell y Encanto, y en el oeste por la Avenida 59. Ésta es el área donde se lleva a cabo la investigación de la contaminación del agua subterránea. El área no contiene los límites específicos de la contaminación.

¿CUÁNDO SE DESCUBRIÓ LA CONTAMINACIÓN?

En 1982,

La contaminación en el área se descubrió por primera vez en julio de 1982. La Ciudad de Phoenix encontró el disolvente de limpieza tricloroetileno (TCE) en cuatro pozos de agua potable en el Área Central Oeste de Phoenix. Los dos pozos con las mayores concentraciones de TCE fueron cerrados en 1982. Los otros dos pozos de agua siguieron bajo observación para asegurar que cumplan con normas estatales para el agua potable. En 1989, la Ciudad de Phoenix cerró estos pozos.

Después del descubrimiento inicial, el Departamento de Servicios de Salud de Arizona (ADHS), la Ciudad de Phoenix y el Proyecto del Río Salado (SRP) concluyeron una extensa colección de muestras de agua. Las muestras de agua verificaron la presencia de disolventes clorinados en los pozos de agua potable y de irrigación del Área Central Oeste de Phoenix.

En 1984, mientras ADHS investigaba la contaminación en uno de los pozos de agua, se investigaron más de 400 comercios que posiblemente almacenaron, usaron o dispusieron de sustancias peligrosas. La investigación determinó que la contaminación provenía de varias fuentes. En 1987, el Área Central Oeste de Phoenix fue incluida en la lista de prioridades del Superfondo Estatal (WQARF).

El Departamento de Calidad Ambiental de Arizona ha tomado una extensa cantidad de muestras del subsuelo y de sus vapores, ha instalado pozos de observación, y ha tomado y analizado muestras de agua subterránea. Ha sido una gran tarea el identificar los orígenes y determinar la extensión de la contaminación del agua subterránea.

¿ES SEGURA EL AGUA QUE BEBEMOS?

Sí.

La contaminación en el Área Central Oeste de Phoenix no representa una amenaza a los abastecimientos de agua potable que actualmente proveen agua en el área. La Ciudad de Phoenix provee agua potable a las residencias y comercios. El agua viene de agua superficial y de agua subterránea de otras partes del área metropolitana, y no de agua subterránea del Área Central Oeste de Phoenix.

La contaminación del agua subterránea representa una amenaza a largo plazo a los futuros abastecimientos de agua potable y debe ser tratada para evitar que se propague. Por esto, ADEQ está trabajando para inves-

La contaminación en el Área Central Oeste de Phoenix no representa una amenaza a los abastecimientos de agua potable que actualmente proveen agua en el área. Hasta el momento, las pruebas indican que casi no existe la posibilidad de contacto humano con la contaminación.

tigar, controlar y remover la contaminación que existe en el área a través del Superfondo Estatal.

¿QUÉ SABEMOS SOBRE LA CONTAMINACIÓN DEL AGUA SUBTERRÁNEA EN EL ÁREA?

La contaminación es causada por disolventes industriales que fueron comúnmente usados en el pasado.

Los análisis del agua subterránea en el Área Central Oeste de Phoenix han detectado principalmente tricloretileno (TCE), tetracloretileno (PCE) y 1,1-dicloroetileno (1,1-DCE). TCE y PCE son disolventes industriales comúnmente usados en el pasado, mientras que 1,1-DCE es producido por la degradación de las otras dos sustancias químicas.

Cuatro zonas de contaminación han sido detectadas al norte y sur del Canal Grand. Las concentraciones de TCE, PCE y 1,1-DCE sobrepasan las normas de salud del agua potable establecidas por la Agencia de Protección Ambiental (EPA) y el estado de

Arizona. Estas normas son conocidas como los Niveles de Contaminación Máximos, o MCLs. TCE es el contaminante más propagado o comúnmente encontrado en esta área, al igual que en la mayoría de las áreas donde existe contaminación del agua subterránea en el área metropolitana de Phoenix.

El Nivel de Contaminación Máximo (MCL), o nivel seguro para el TCE en agua potable, es 5 partes por billón (ppb). Un ppb es aproximadamente el equivalente a una gota de agua en una alberca Olímpica.

Hasta ahora, dos propiedades al norte del Canal Grand han sido identificadas como fuentes de contaminación del agua subterránea: Osborn Products, Inc. y T&B Mfg. Co. ADEQ está investigando otras fuentes de contaminación en el área.

Al sur del Canal Grand, otras dos zonas de contaminación han sido detectadas. Esta contaminación proviene de dos propiedades: "West Osborn Complex" y Layke, Inc. Investigaciones conducidas por científicos del ADEQ continuar para identificar otras fuentes contaminantes.

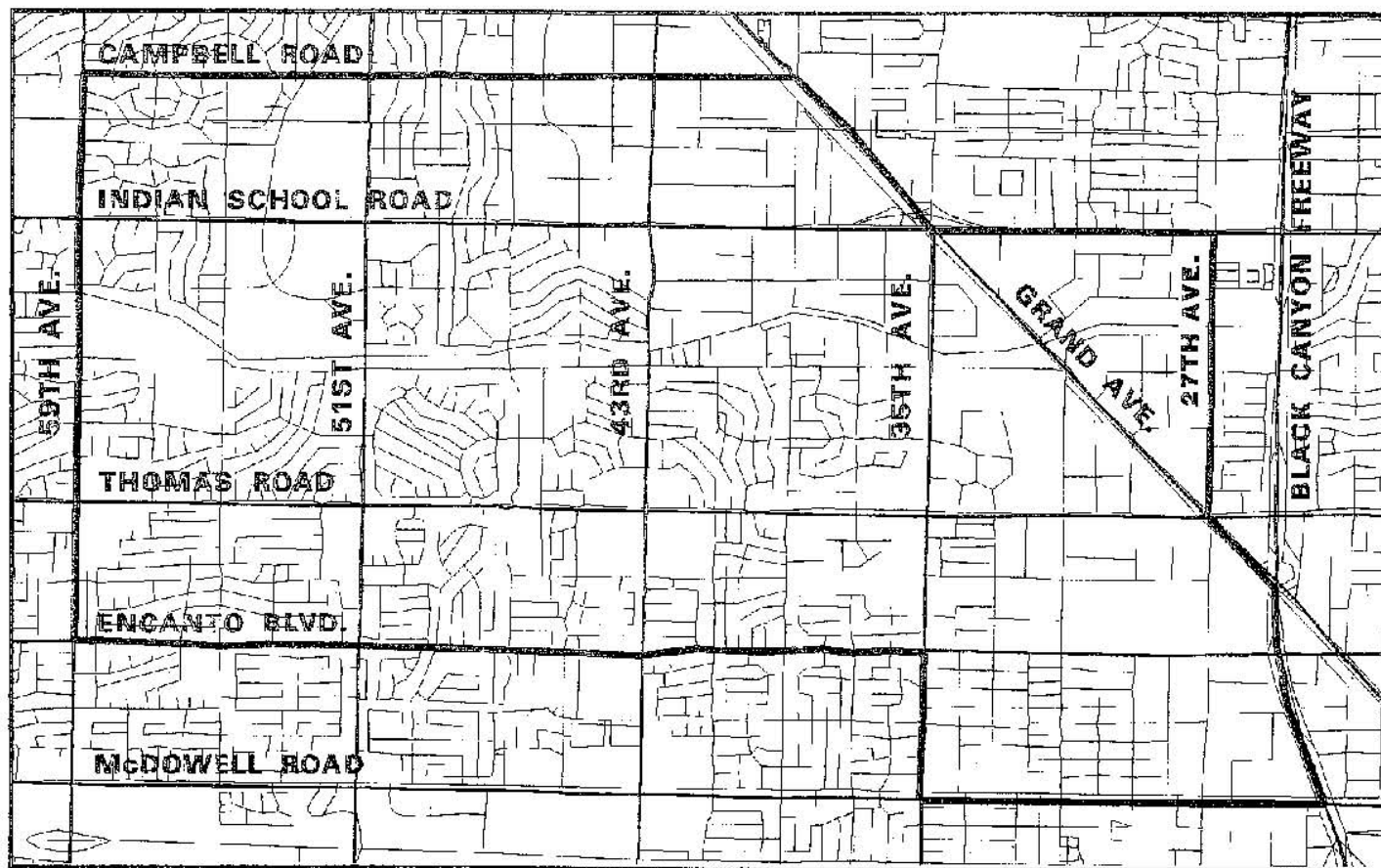
¿EXISTE ALGÚN RIESGO A LA SALUD DEBIDO A LOS CONTAMINANTES EN ESTA ÁREA?

No, probablemente.

Hasta el momento, las pruebas indican que casi no existe la posibilidad de contacto humano con la contaminación.

Las pruebas indican que los terrenos contaminados están bajo estacionamientos de asfalto o áreas de almacenaje cubiertas por asfalto, o bajo pisos de concreto de edificios. La gente estaría expuesta al agua contaminada si la bebieran o se bañaran con ella, pero los pozos contaminados han sido cerrados. Estos ya no se usan para irrigación o para proveer agua potable.

No se ha encontrado una conexión entre la contaminación del agua subterránea y los casos de cáncer en el área.



El mapa demuestra los límites del Área Central Oeste de Phoenix del Superfondo Estatal.

Aún cuando existe una leve posibilidad de que la gente tenga contacto con los contaminantes, ADHS conducirá Estudios de Riesgo en propiedades donde se estén conduciendo Investigaciones Remediales/ Estudios Factibles (RI/FS) para evaluar los posibles riesgos a la salud. Los contaminantes son clasificados como probables carcinógenos porque varios estudios han indicado que causan cáncer en algunas especies de animales. Se sabe que la exposición a altas concentraciones de estos contaminantes, como en un sitio de trabajo, puede causar efectos adversos a la salud.

¿Y QUÉ SOBRE EL RIESGO A CÁNCER EN EL ÁREA?

No se ha encontrado una conexión entre la contaminación del agua subterránea y los casos de cáncer en el área.

El tema sobre una posible conexión

entre la contaminación del agua subterránea y el llamado "grupo de cáncer" de Maryvale se mencionó por primera vez en los 1980s. Este tema originó después de que se reportaron, en una escuela local, un alto número de casos de leucemia infantil.

Una investigación del ADHS encontró que, entre 1965 y 1986, la proporción de casos de leucemia infantil en el Área Central Oeste de Phoenix era levemente elevada, comparada con el resto de los casos en el Condado de Maricopa. Un estudio más reciente conducido por el ADHS que cubre el período de tiempo entre 1987 y 1990 indicó que las proporciones ya no eran elevadas. Hasta el momento, no se ha encontrado una asociación con la contaminación del agua subterránea.

Actualmente, ADHS está conduciendo un estudio que determinará si factores ambientales están asociados con la pro-

porción elevada de leucemia infantil detectada anteriormente en el área. Se espera que este estudio se complete en 1994.

¿QUÉ SE ESTÁ HACIENDO AHORA?

El trabajo continúa para tratar el terreno y agua subterránea contaminada.

Hasta el momento, ADEQ ha identificado cuatro propiedades que han causado contaminación en el área, pero las investigaciones continúan para encontrar otras. Los Partidos Responsables (RPs) vinculados con estas propiedades son legalmente responsables por los gastos de la investigación y el removimiento de la contaminación bajo el Acto de Respuesta Ambiental Comprensiva, de Compensación y Responsabilidad (CERCLA), o Superfondo federal del 1980.

Las cuatro propiedades son:

La fábrica de la compañía F&B Mfg. Co.:

Esta propiedad se encuentra en el 4316 al norte de la Avenida 39. Entre 1966 y 1987, PCE se usó en el proceso de remover grasa. Muestras de terreno en el área han detectado altas concentraciones de PCE.

En octubre de 1992, F&B instaló un pozo de observación para evaluar el impacto del PCE en el agua subterránea. Las muestras de agua tomadas de este pozo encontraron concentraciones de PCE entre 710 partes por billón (ppb) y 110,000 ppb. El Nivel de Contaminación Máximo (MCL) del PCE en agua potable es 5 ppb.

Bajo un acuerdo legal llevado a cabo en la Corte de Distrito Federal en noviembre de 1992, F&B acordó a conducir un RI/FS, remover la contaminación en el terreno de la propiedad, y devolver al estado de Arizona los gastos incurridos en el pasado y los que se incurran en el futuro, relacionados con la investigación.

Como resultado de este acuerdo, se desarrolló un Plan de Relaciones Comunitarias. Este plan establece un comité técnico que consiste del ADEQ, ADHS, el Departamento de Recursos de Agua de Arizona (ADWR), el Proyecto del Río Salado (SRP), la Ciudad de Phoenix y F&B Mfg. Co. Este comité coordinará el trabajo que se llevará a cabo en la propiedad, y en el Área Central Oeste de Phoenix.

Hasta ahora, F&B ha instalado tres pozos de observación y se espera que el cuarto pozo sea instalado y muestras de agua se tomen en febrero de 1994. F&B también ha tomado muestras del terreno en su propiedad.

La propiedad del "West Osborn Complex":

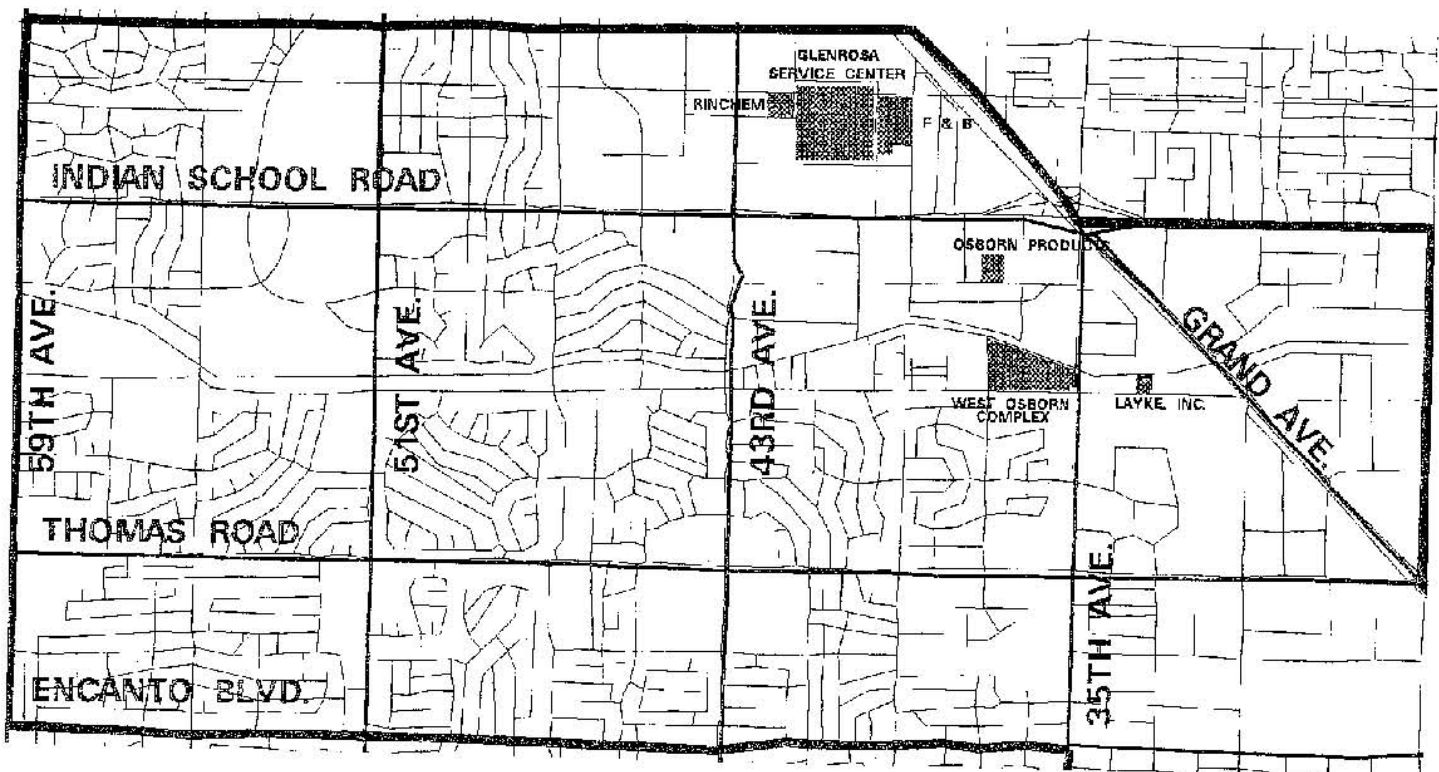
La propiedad se encuentra en el 3536, 3600 y 3640 al oeste de la Calle Osborn. Esta es una de las fuentes de TCE que se encuentra en el agua subterránea. En este sitio, entre 1958 y 1974, varias compañías manufacturaron capacitores, diodos y semiconductores. La propiedad fue subdivi-

vidida en tres parcelas que se vendieron entre 1976 y 1978.

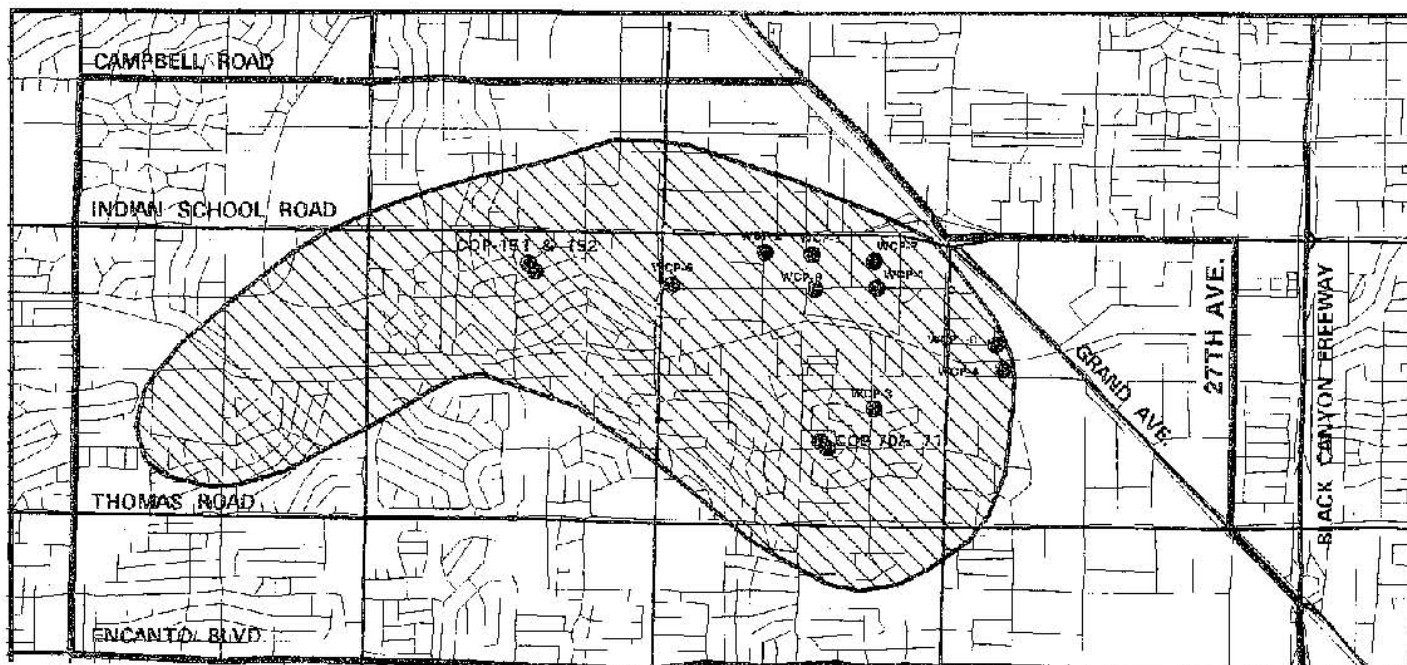
Aparentemente, pozos sépticos fueron usados para disponer TCE y otros desechos industriales. TCE también se dispuso en la superficie del terreno.

En 1992, cinco pozos de observación se instalaron para evaluar la contaminación del agua subterránea debajo de la propiedad. Las muestras de agua encontraron concentraciones de TCE entre 1,200 ppb y 1,600 ppb. PCE fue detectado en concentraciones entre 14 ppb y 61 ppb. 1,1-DCE fue detectado en concentraciones entre 190 ppb y 260 ppb. El Nivel de Contaminación Máximo (MCL) del 1,1-DCE es 7 ppb.

En julio de 1991, ADEQ y Nucor Corp., una de las compañías que antiguamente operaron en la propiedad, llegaron a un acuerdo legal. Como parte del acuerdo, Nucor acordó a pagar \$1.275 millones por su contribución en la contaminación del agua subterránea del Área Central Oeste de Phoenix. La Orden de la Corte que aprobó



El mapa demuestra los límites del Área Central Oeste de Phoenix, las propiedades que han causado contaminación en el área, y otras propiedades que actualmente están bajo investigación.



El mapa demuestra la extensión aproximada de la contaminación del agua subterránea, y los sitios donde se encuentran los pozos de observación y los pozos de agua potable. Aún cuando otros tipos de contaminación han sido detectados, tricloroetileno (TCE), un disolvente industrial, es el contaminante más propagado o comúnmente encontrado en esta área.

el acuerdo fue firmada en septiembre de 1993. Una apelación ha detenido el pago del dinero.

En mayo de 1993, ADEQ demandó a United Industria Corporation, otra de las compañías que antiguamente operaron en la propiedad. La compañía se demandó bajo la Sección 107 de CERCLA para forzar a la compañía a que remueva la contaminación del sitio y pague al estado los gastos que ha incurrido.

La fábrica de la compañía de Layke, Inc.:

La fábrica, que se encuentra en el 3330 al oeste de la Calle Osborn, ha estado en operación desde 1967. Layke, Inc. fabrica piezas para industrias aeroespaciales, de la aviación, electrónicas y otras.

Entre 1975 y 1983, Layke utilizó TCE como un agente removedor de aceite. Un tanque de almacenamiento subterráneo que contenía aceite usado contaminado con TCE se derramó, causando que el terreno y el agua subterránea se contaminaran con TCE. En el pozo de observación que se instaló en la propiedad se halló con-

centraciones de TCE de 420 ppb, sobrepasando el MCL del TCE de 5 ppb. El tanque ya se ha removido.

Layke, Inc. planea instalar un sistema de extracción de vapor del subsuelo para remover la contaminación en el terreno cerca del antiguo tanque, e instalará tres pozos de observación. ADEQ también planea recobrar los gastos que ha incurrido en investigar esta propiedad.

La fábrica de Osborn Products, Inc.:

La propiedad, que se encuentra en el 3632 al oeste de la Avenida Clarendon, estuvo en operación entre 1956 y 1984. Osborn Products operó un negocio de enchapado de cromo y de maquinación de piezas aeroespaciales. TCE se usó para limpiar las piezas. En el presente, la compañía opera una instalación en el norte de Phoenix.

Aparentemente, disolventes de desecho se almacenaron en tanques o se dispusieron en pozos secos ("drywells"). En 1984, ADHS tomó muestras del terreno alrededor de los pozos secos y detectaron TCE y otras

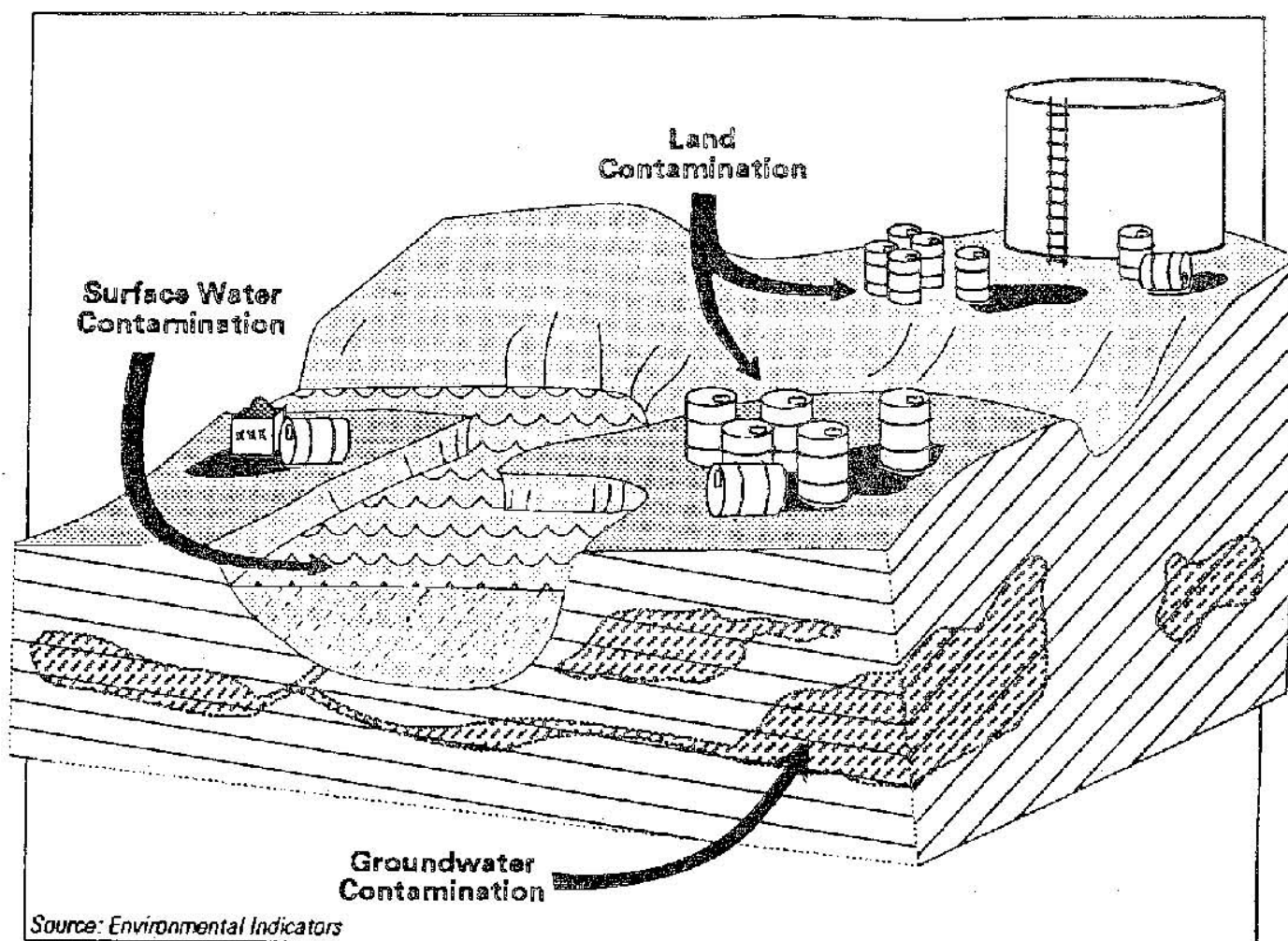
sustancias químicas. Los pozos secos se cerraron en 1986.

En 1992, ADEQ instaló dos pozos de observación en la propiedad. Las concentraciones de TCE variaron entre 19 ppb y 320 ppb, excediendo el MCL del TCE de 5 ppb. ADEQ planea conducir más investigaciones en esta propiedad.

OTRAS INVESTIGACIONES

Otras posibles fuentes de la contaminación están bajo investigación.

El Departamento de Calidad Ambiental de Arizona ha producido un reporte que documenta los resultados de las muestras de agua que se tomaron cerca de la propiedad del Centro de Servicio de Glenrosa ("Glenrosa Service Center"), que se encuentra al norte de la Calle Indian School, y entre las Avenidas 40 y 43. Desde 1989, ADEQ ha estado tomando muestras de agua de los pozos de observación cercanos a esta propiedad. TCE, PCE y 1,1-DCE han sido detectados en esta área. El reporte indica que otras propiedades en el área, además de la de F&B, pueden ser



La figura demuestra los diferentes medios ambientales que se contaminan y típicamente se investigan bajo las Investigaciones Remediales/Estudios Factibles: el terreno, el agua subterránea y el agua superficial.

fuentes de la contaminación del agua subterránea.

La antigua propiedad de la compañía Rinchem, cerca del Centro de Servicio de Glenrosa, es una de las propiedades bajo investigación en esta área. Los dueños de la propiedad, voluntariamente, trabajarán bajo la supervisión de ingenieros y científicos del ADEQ. El plan de trabajo actualmente se está evaluando.

ADEQ ha investigado docenas de propiedades en el área y continúa buscando otras propiedades que puedan ser posibles fuentes de la contaminación.

¿QUÉ EFECTO TIENE ESTO EN MI PROPIEDAD?

Bajo la ley de Arizona, los propietarios residenciales no son responsables de la

impieza de la contaminación en o debajo de su residencia si proviene de otro sitio. EPA también tiene una política informal de no mantener a los dueños de residencias responsables de la contaminación.

Un vendedor de fincas ("Realtor") en el estado de Arizona está obligado por ley a revelar a un comprador cualquier dato material que pueda influenciar la decisión de comprar una propiedad. El hecho de que una propiedad se encuentra en un área del programa Superfondo puede ser considerado un dato material. Generalmente, si la contaminación del agua subterránea no causa ningún problema adverso en la superficie, no debe de causar ningún efecto en el valor de la propiedad.

PARA MÁS INFORMACIÓN.

Usted puede revisar los documentos del Área Central Oeste de Phoenix en el:

Departamento de Calidad Ambiental
Coordinadora de Archivos de WQARF
3033 al norte de la Avenida Central
Quinto Piso
Phoenix, Arizona 85012
(602) 207-4190

Abierto: lunes - viernes, 8 a.m. - 5 p.m.

O llame al "Superfund Hotline" del Departamento de Calidad Ambiental de Arizona al 207-4360.

Si tiene preguntas sobre los efectos a la salud de los contaminantes que se encuentran en el agua subterránea, por favor llame al Departamento de Servicios de Salud de Arizona al 542-7310.

GLOSARIO

Acuífero: Una formación geológica subterránea de materiales como tierra y rocas, que puede almacenar y suministrar agua a pozos y manantiales.

CERCLA: Acto de Respuesta Ambiental Comprensiva, de Compensación y Responsabilidad, o "Superfondo." CERCLA, también conocido como la ley federal del "Superfondo," fue promulgada en 1980. CERCLA estableció un programa para: (1) identificar sitios donde sustancias peligrosas hayan sido o puedan haber sido dispuestas en el medio ambiente; (2) asegurar que estos sitios son limpiados por los partidos responsables o el gobierno; (3) evaluar los daños causados a los recursos naturales; y (4) crear un procedimiento para que las entidades que hayan limpiado la contaminación puedan recobrar sus gastos de un partido o partidos responsables.

Limpieza ("Cleanup"): Acciones que se llevan a cabo para bregar con las sustancias peligrosas que han sido emitidas o bajo amenaza de ser emitidas, que pueden afectar al pueblo y el medio ambiente. El término "limpieza" es algunas veces intercambiado con los términos "acción remedial," "acción de remoción," "acción de respuesta," "remedio," "remediación," o "acción correctiva."

Pozo seco ("Drywell"): Un pozo en la tierra en que su profundidad es mayor que su anchura, y está designado y construido específicamente para disponer de agua de lluvia.

Agua subterránea: Agua bajo la superficie de la tierra que llena los espacios entre materiales como la arena, arcilla y grava. En los acuíferos, el agua subterránea se encuentra en cantidades suficientes como para ser bebida, usada para irrigación y otros propósitos.

Sustancia Peligrosa: Cualquier elemento, compuesto, mezcla, solución, o sustancia listada como una "sustancia peligrosa" bajo la ley de CERCLA. De acuerdo con CERCLA, tetracloroetileno (PCE), tricloroetileno (TCE), y 1,1-dicloroetileno (1,1-DCE) son sustancias peligrosas.

Nivel de Contaminación Máximo (MCL): El nivel máximo permitido de un contaminante en agua potable que se distribuye a cualquiera que use un sistema de agua público. MCLs son estándares o normas que se tienen que cumplir.

Pozos de Observación ("Monitor Wells"): Pozos de agua especialmente contruidos en sitios específicos, dentro o fuera de una propiedad, en donde se pueden tomar muestras del agua subterránea a profundidades selectas, para determinar cosas como la dirección del flujo del agua subterránea, y los tipos y cantidades de contaminantes presentes.

Partido Responsable (RP): Las entidades identificadas por el ADEQ como responsables por los gastos de limpieza bajo la ley de CERCLA. RPs pueden incluir generadores y dueños/operadores presentes o antiguos de ciertas propiedades, en donde sustancias peligrosas han sido almacenadas, tratadas y/o dispuestas. RPs son conocidos como Posibles Partidos Responsables.

Investigación Remedial/Estudio Factible (RI/FS): Una investigación conducida por RPs o ADEQ en dos fases, con el propósito de investigar la extensión de la contaminación (RI) y determinar las alternativas remediales (FS) que puedan ser utilizadas para limpiar el sitio. Un RI/FS requiere extensos estudios técnicos que pueden incluir la toma y análisis de muestras del terreno y agua subterránea, tanto en la propiedad como en las áreas cercanas en donde también haya contaminación. El objetivo del RI/FS es obtener la información suficiente para evaluar y seleccionar la alternativa de limpieza más apropiada para el sitio.

WQARF: Fondo Giratorio Para La Seguridad De La Calidad Del Agua. Un programa establecido por la legislatura del estado de Arizona para: (1) conducir investigaciones de la calidad del agua subterránea y superficial a través del estado; (2) conducir estudios sobre los efectos a la salud, incluyendo estudios epidemiológicos y estudios de riesgo; (3) conducir acciones remediales de emergencia; y (4) conducir acciones remediales a largo plazo. El programa de WQARF obtiene sus fondos a través del estado, penalidades civiles y criminales, y fondos recobrados de los RPs.

CUPÓN PARA LISTA DE CORREO PROYECTO DEL ÁREA CENTRAL OESTE DE PHOENIX

Si usted desea recibir la más reciente información sobre el proyecto del Área Central Oeste de Phoenix, por favor devuelva este cupón y usted será incluido en la lista de correo del proyecto.

Nombre: _____ Teléfono: _____

Dirección: _____

Organización/Afiliación (si alguna): _____

Devuelva a: Ana Vargas, ADEQ, 3033 N. Avenida Central, Phoenix, AZ 85012

NOTICIA OFICIAL ESTADO DE ARIZONA

Si usted tiene un pozo en el patio o en algún otro sitio de su propiedad, o conoce de algún pozo privado en el área de la contaminación del agua subterránea y sospecha que no está registrado con el Departamento de Recursos de Agua, por favor llame al 207-4360. Usted puede dejar un mensaje en inglés o español y alguien le devolverá la llamada tan pronto como pueda.

**USTED ESTA
INVITADO A UNA
JUNTA DE LA
COMUNIDAD:**

martes, 8 de febrero
5:30-8:30 p.m.

Vea la portada para más detalles.



Asuntos Públicos
Departamento de Calidad Ambiental de Arizona
3033 N. Avenida Central
Phoenix, Arizona 85012



Impreso en paper reciclado

El Departamento de Calidad Ambiental de Arizona preservará, protegerá y mejorará el medio ambiente y la salud pública, y será un líder en el desarrollo de la política pública para mantener y mejorar la calidad del aire, el terreno y los recursos de agua de Arizona.



Summer '94

*Este documento
se puede obtener
en español
llamando a
Superfund
Hotline
al 207-4360.*

**You're
Invited
To An
Open House
To Learn
More:**

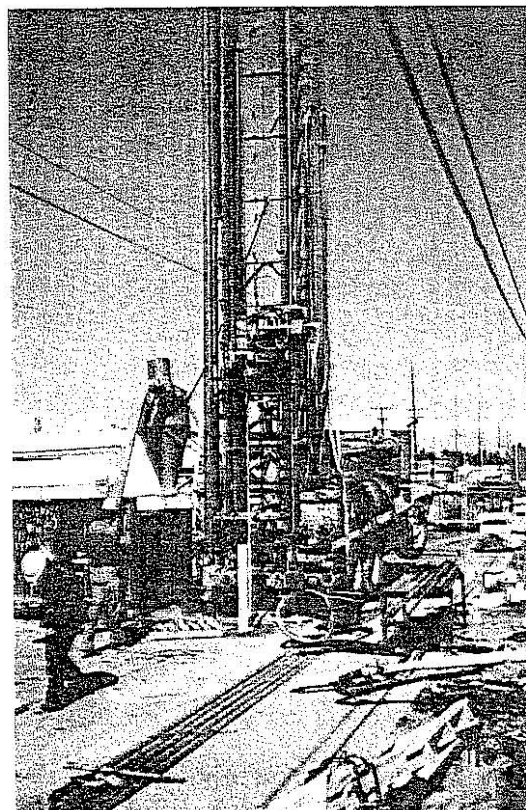
**Thursday,
June 23
5:30-8:30 p.m.
See
page 6
for details.**

ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY THE WEST CENTRAL PHOENIX STATE SUPERFUND PROJECT AREA

UPDATE ON THE F&B MFG. CO. AND OTHER INVESTIGATIONS

For several years, the Arizona Department of Environmental Quality (ADEQ) has been investigating soil and groundwater contamination from industrial solvents in West Central Phoenix. We've been working with property owners or businesses conducting the investigations at the properties. This newsletter provides detailed information about the investigation being conducted at the F&B Mfg. Co. (F&B) facility under ADEQ's supervision (see Figure 1). F&B was the first company to enter into a legal agreement with ADEQ to conduct an extensive environmental investigation at its facility.

Also included are highlights of the water quality report that will be completed by ADEQ as well as highlights of some of the other facility investigations in the West Central Phoenix area. Other facilities conducting investigations, which are mentioned in this newsletter, are the former Rinchem



This photograph was taken during the drilling of monitor well MW-4 at the F&B Mfg. Co. facility in the West Central Phoenix area (see pages 2 and 3 for more details).

Company facility, the former Van Waters & Rogers, Inc. facility and the Layke, Inc. facility (see Figure 1).

WHAT DOES F&B MANUFACTURE?

F&B makes metal aircraft and spacecraft parts.

The F&B facility is located at 4316 North 39th Avenue in Phoenix. F&B has operated this Arizona plant since 1967 and currently employs more than 125 persons. F&B manufactures metal aircraft and spacecraft parts as well as a variety of medical specialty and consumer items.

WHAT'S AN OPEN HOUSE?

An Open House is a meeting designed to give citizens the opportunity to talk to employees from the Arizona Department of Environmental Quality (ADEQ) and other agencies on an individual basis. The format is casual and no formal presentations are given.

WHAT HAVE THE INVESTIGATIONS AT F&B FOUND?

Primarily, the chemical PCE has been found in soil and groundwater. The concentrations of PCE found in the groundwater beneath the F&B facility are higher than the health standards set for PCE in drinking water by the U.S. Environmental Protection Agency (EPA) and the state of Arizona.

During the manufacturing process, metal parts are cleaned by dipping them in a vapor degreaser, a rectangular metal structure that contains a cleaning solvent (see Figure 2). From 1969 until 1987, the solvent used was tetrachloroethylene (PCE), a chemical commonly used in the clothes dry-cleaning process. In 1987, F&B switched to 1,1,1-trichloroethane (TCA), a less environmentally damaging degreasing solvent.

In 1989, ADEQ conducted soil and soil-

gas sampling at F&B. Soil-gas samples detected PCE, TCA, trichloroethylene (TCE), 1,1-dichloroethylene (1,1-DCE) and benzene. Soil samples contained PCE and toluene. As a result of this investigation, ADEQ asked F&B to conduct additional studies.

In November 1990, F&B collected 30 soil-gas samples on the site. Shallow soil samples were collected at eight locations during February 1991, and 21 soil borings were drilled during March and April 1991. The results of each of those investigations were summarized in reports on file at ADEQ. During the April 1991 drilling, it was discovered that PCE had leaked from F&B's degreaser into the soil under the building.

In October 1991, F&B installed a 230-foot-deep monitor well (MW-1) near the vapor degreaser (see Figure 2). ADEQ and F&B collected groundwater samples at various depths. The samples found that

groundwater beneath the degreaser contained high concentrations of PCE (710–110,000 micrograms per liter, or $\mu\text{g/L}$). Other contaminants, such as TCE and TCA, were also detected in groundwater samples, but at significantly lower concentrations (less than 8 $\mu\text{g/L}$). The concentration at which PCE is considered safe in drinking water (Maximum Contaminant Level, or MCL) is 5 $\mu\text{g/L}$.

In May 1993, F&B installed a second monitor well (MW-2) 500 feet deep to investigate whether the PCE contamination went deeper than 230 feet (see Figure 2). High concentrations of PCE (510–1,200 $\mu\text{g/L}$) were detected from 230 feet to 500 feet. TCE and TCA were also detected but at significantly lower concentrations (less than 5 $\mu\text{g/L}$). We do not yet know how deep the PCE contamination goes. It is also unknown whether and how much PCE could have come from other sources.

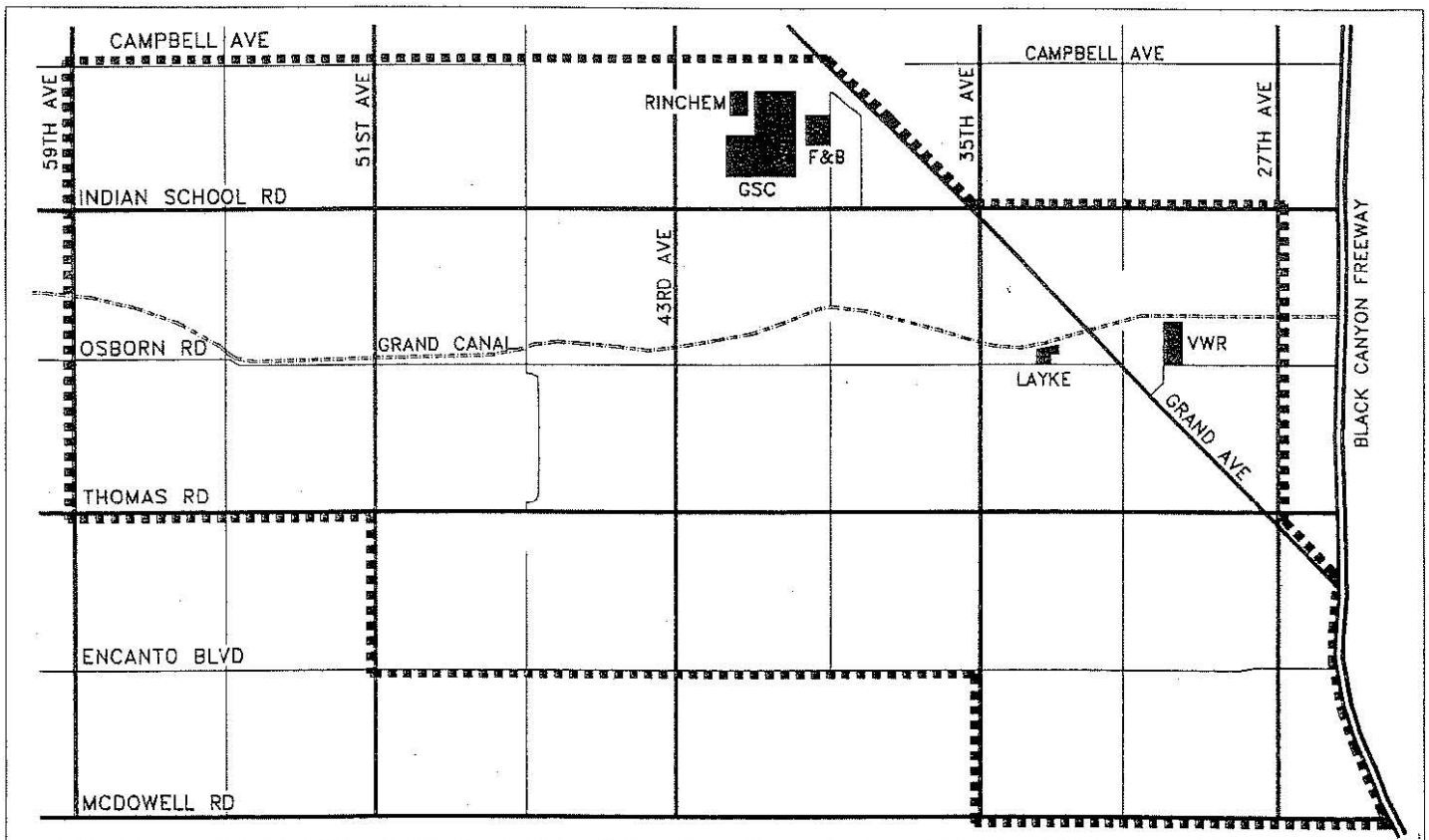


Figure 1: The map shows the boundaries of the West Central Phoenix area and the locations of the facilities discussed in this newsletter. (Note: These are the correct boundaries of the West Central Phoenix area. The boundaries shown on the map in the last newsletter were printed incorrectly.)

WHAT WORK IS BEING DONE BY F&B NOW?

Under ADEQ's supervision, F&B is collecting more data about both on-site and off-site concentrations of contaminants in groundwater.

Since early 1992, F&B has been conducting an investigation called a Remedial Investigation/Feasibility Study (RI/FS). The RI/FS Work Plan, which describes how F&B's investigation will be done, is on file at ADEQ.

The primary objectives of the RI/FS are to assess the extent of contamination in the soil and groundwater (primarily PCE) and to determine the most appropriate way to clean up F&B's site.

F&B has installed two additional 500-foot-deep monitor wells (MW-3 and MW-4) to learn more about the groundwater contamination (see Figure 2). Those wells were sampled during February 1994, and PCE was again detected at concentrations exceeding MCLs. However, contaminant concentrations in these wells were significantly lower than those from wells MW-1 and MW-2 near the degreaser. F&B sampled all four of its wells during April 1994 and will sample them again in July and October. F&B is measuring water levels in its wells on a monthly basis during 1994 to develop a thorough understanding of groundwater movement in the area.

During the early part of the RI/FS, F&B interviewed former and current employees about how chemicals were used and disposed of. In addition, F&B drilled and collected soil samples beneath another area of the building (the Clean Room) and closed two drywells. F&B is also working to identify other sources of soil and groundwater contamination from other industrial facilities in the area.

As required by ADEQ, F&B is paying the state back for past and future investigative costs.

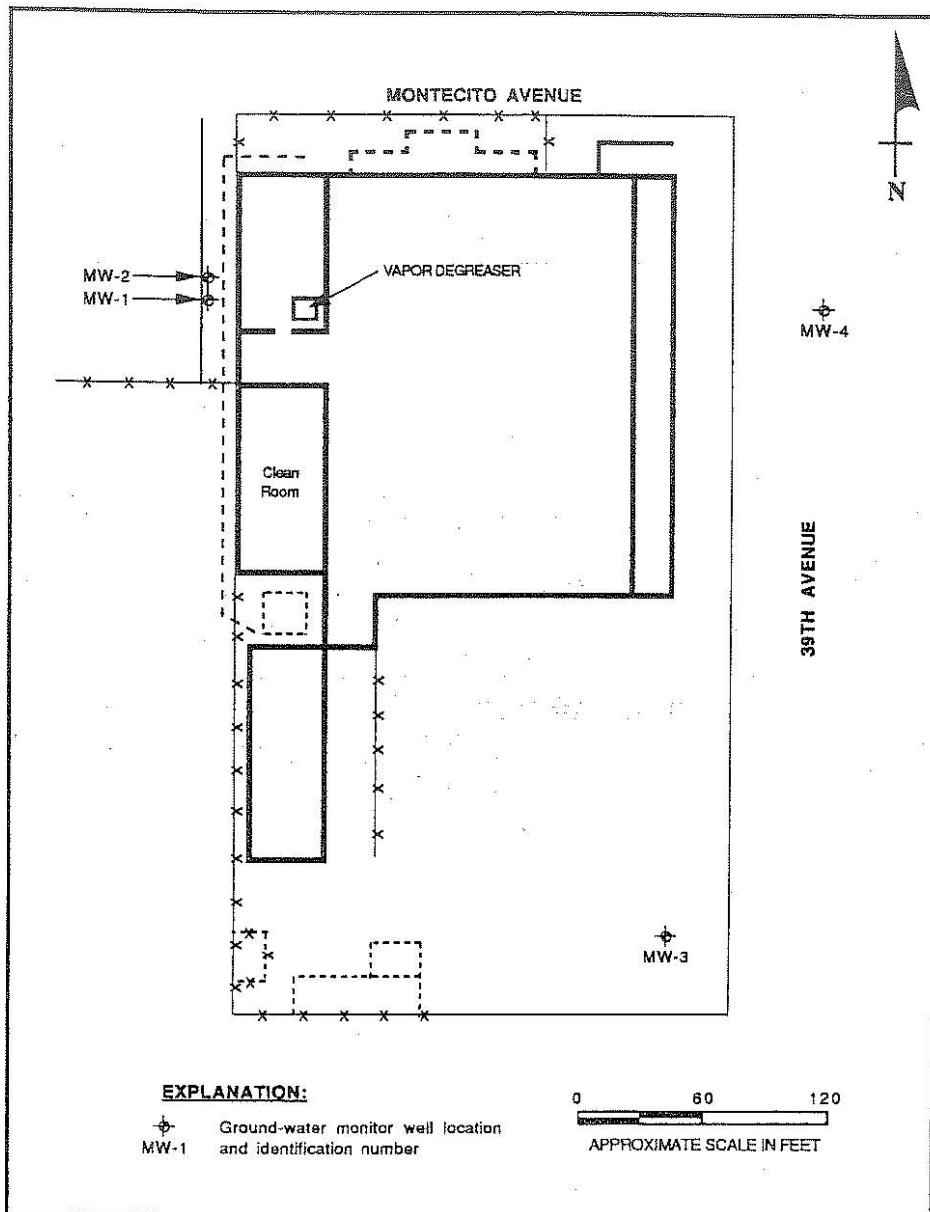


Figure 2: The diagram shows the F&B Mfg. Co. facility and the locations of the four monitor wells installed to date by the company during its environmental investigation.

WHAT WILL F&B DO IN THE NEXT 18 MONTHS?

Treatment methods are being evaluated, and cleanup activities are scheduled to begin in early 1995.

F&B is evaluating different methods to clean up contaminated soil beneath its degreaser. The cleanup alternatives are limited because the contamination is under F&B's building. One option is soil vapor extraction. F&B is required to prepare a report for ADEQ's evaluation that

describes the most feasible cleanup methods. According to the present schedule, soil cleanup activities will start in early 1995 and will continue for several years.

ARE PEOPLE LIKELY TO BE EXPOSED TO PCE IN THE SOIL BENEATH THE F&B FACILITY?

No. The F&B facility is in an old, industrial part of West Central Phoenix. The closest neighborhood is about one half mile from the F&B site.

Soil that has been contaminated by PCE is under F&B's building, and any human contact with that soil is unlikely.

IS DRINKING WATER IN THE AREA SAFE?

Yes. Underground water pollution beneath the F&B site has nothing to do with drinking water supplies in the area.

Residents and businesses are served by City of Phoenix drinking water. In the 1980s, Phoenix closed four drinking water wells because of contamination. Drinking water is now supplied from surface water and groundwater from other areas and not from West Central Phoenix groundwater.

Groundwater contamination poses a long-term threat to future drinking water supplies and must be dealt with to keep the contamination from spreading, or cleaned up to make it usable for the future. For that reason, ADEQ is working to investigate, control and clean up contamination at the F&B facility and in West Central Phoenix through the Water Quality Assurance Revolving Fund (WQARF), also known as the State Superfund.

WHAT ABOUT THE RISK OF CANCER IN THIS AREA?

Research has found no link between groundwater contamination and cases of cancer in the West Central Phoenix area.

The question of a possible connection between groundwater contamination and the so-called Maryvale "cancer cluster" first was raised in the 1980s. The issue came up after reports of a higher-than-average number of childhood leukemia cases in a local school.

Arizona Department of Health Services (ADHS) research found slightly higher rates of childhood leukemia in West Central Phoenix compared to the rest of Maricopa County between 1965 and 1986. A more

recent study by ADHS covering the period from 1987 to 1990 showed that the rates no longer were elevated. Research conducted to date by several agencies has shown no association with groundwater contamination.

A case control study is currently being conducted by ADHS. This research will determine if environmental factors may be associated with the previously elevated childhood leukemia rates in West Central Phoenix. The study is expected to be completed by early Fall 1994.

WHAT OTHER FACILITY INVESTIGATIONS IN WEST CENTRAL PHOENIX ARE GOING ON?

ADEQ is working with other property owners or facilities conducting investigations under ADEQ's supervision.

ADEQ has conducted investigations at dozens of facilities throughout the area and is still looking for other facilities that could be sources of the contamination. Other facilities currently conducting investigations under ADEQ's supervision are:

The Former Rinchem Company Facility:

Rinchem had a chemical warehouse and distribution facility at 4115 West Turney Avenue from 1982 until 1993 (see Figure 1). Chemicals were stored inside a warehouse and outside in above-ground storage tanks (a tank farm). A pumping station was used for bulk rail shipments to and from the facility.

Since 1988, 1,1-DCE has been present in groundwater samples collected from an on-site well and nearby monitor wells installed by the City of Phoenix. These monitor wells were installed as part of the City's groundwater investigation at the Glenrosa Service Center, a neighboring facility.

In 1991, ADEQ conducted soil and soil-gas sampling at the facility. The soil-gas

samples detected TCE, PCE, 1,1-DCE, TCA and 1,1-dichloroethane (1,1-DCA). Soil samples contained 1,1-DCE, TCA, 1,1-DCA, toluene, ethyl benzene, xylene and acetone. The presence of contaminants in the soil and soil-gas samples, in addition to contamination found in the monitor wells at the property and nearby, seemed to show that the pollution may be coming from the vicinity of the former Rinchem facility.

In 1993, the current property owners of the former Rinchem facility agreed to conduct an investigation of their property. The investigation includes collection of soil, soil-gas and groundwater samples. Areas of concern include the drywells, the tank farm, the chemical blending and repackaging area and the drum storage area. ADEQ reviewed the initial plan and recommended changes. The plan is expected to be finalized soon, and work may begin in June 1994. ADEQ will oversee all work.

The Former Van Waters & Rogers, Inc. Facility

Van Waters & Rogers, Inc. (VW&R), a chemical distribution firm, operated a facility located at 2930 West Osborn Road from 1957 until 1970 (see Figure 1). In 1970, VW&R moved its operation to its current facility on South 45th Avenue in Phoenix. The 2930 W. Osborn Road facility is now owned and occupied by Century Wheel and Rim, a distributor of undercarriage and transportation parts. VW&R is now owned by Univac Corporation.

Historical records and information obtained by ADEQ found that VW&R stored a variety of chemicals at the 2930 W. Osborn Road facility. These chemicals included acids, bases, solvents, pesticides and herbicides. Two above-ground storage tanks, numerous drums and stained areas are visible on historic aerial photographs obtained by ADEQ.

In 1993, ADEQ performed soil and soil-gas sampling at the facility. Soil-gas samples detected TCE, PCE, 1,1-DCE and TCA.

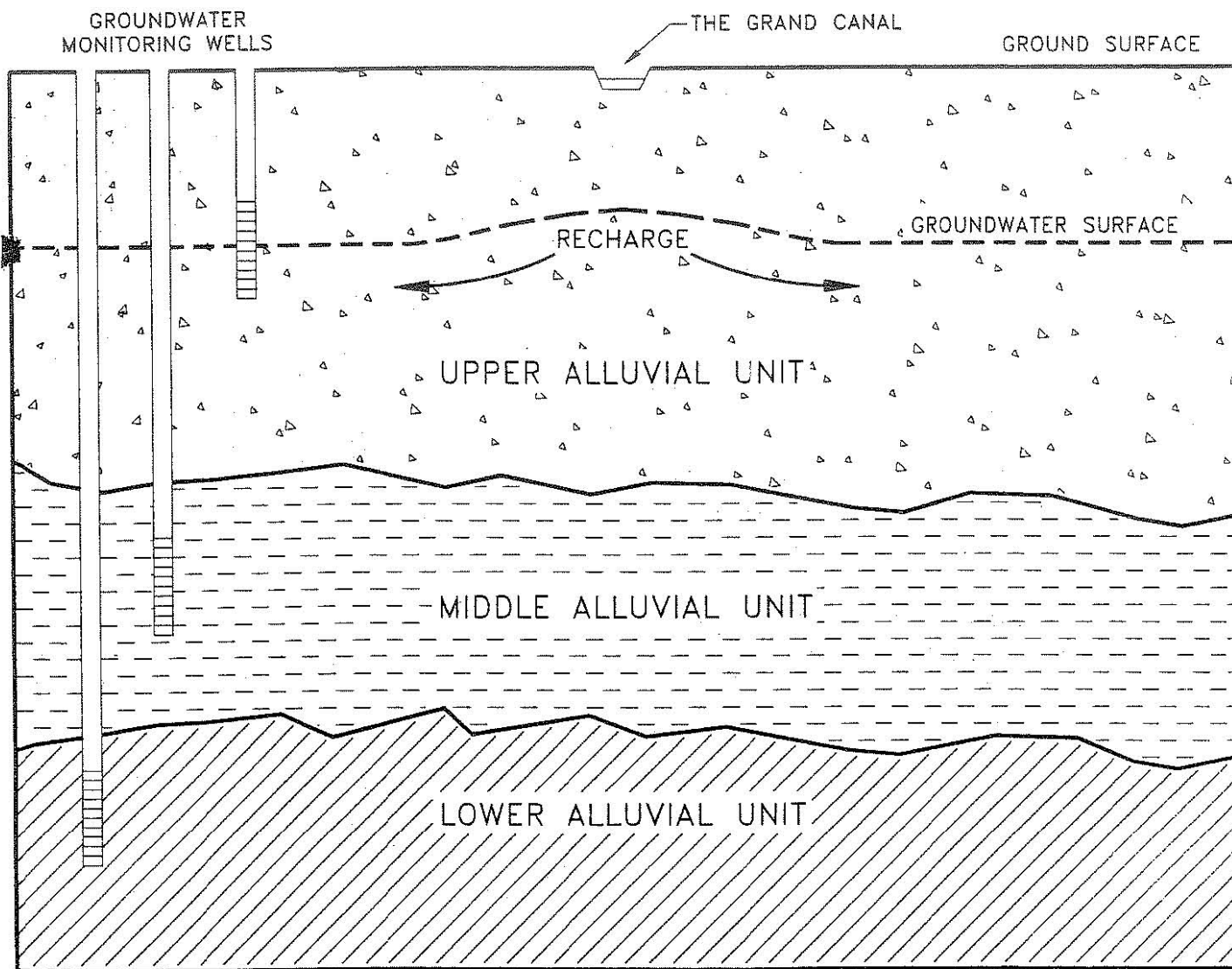


Figure 3: The diagram shows the three different interconnected aquifers present below the West Central Phoenix area. The three units are made up of sand, gravel and clay. The surface of the groundwater is found within the Upper Alluvial Unit and continues through all three units. Three water wells are shown on the left. Wells pump water from the different units depending on how deep they are drilled.

Soil samples contained TCE, PCE, TCA and pesticides, as well as other compounds.

In 1994, Univar Corporation (the parent company of VW&R) agreed to conduct an investigation at its former property. The investigation includes collection of soil, soil-gas and groundwater samples. A workplan for the first phase of the investigation (soil-gas sampling) was submitted to ADEQ for review and approval. Soil-gas sampling will help Univar and ADEQ determine where soil and groundwater samples will be collected during the next phases of the investi-

gation. ADEQ reviewed the initial plan and recommended changes. The plan is expected to be finalized soon, and work may begin in June 1994. ADEQ will oversee all work.

Layke, Inc. Facility:

Layke has been located at 3330 West Osborn Road since 1967 (see Figure 1). Layke makes parts for aircraft, aerospace, electronic and other industries.

Layke used TCE as a degreasing agent from 1975 until 1983. A waste oil underground storage tank became contaminated with TCE, overflowed, and contaminated

the soil. A monitor well was installed at the facility and groundwater samples from the well showed concentrations of TCE. The tank was removed.

Layke will be building a soil vapor extraction system to clean up the petroleum and TCE contaminated soils at the company's facility. The extraction system is designed to prevent these contaminants from reaching groundwater beneath the facility. Layke has submitted a design to ADEQ for review.

WHAT OTHER INVESTIGATIONS IS ADEQ NOW CONDUCTING?

While several facilities in the West Central Phoenix area are conducting facility-specific investigations under ADEQ's supervision, ADEQ is also conducting area-wide groundwater investigations.

The primary goals of ADEQ's area-wide groundwater investigations are to: 1) Identify the type and extent of the area-wide groundwater contamination; 2) Find out if the contamination from different facilities mixes together; and 3) Identify new facilities that may also be sources of contamination. The most recent area-wide investigations conducted by ADEQ are described below:

1994 Area-Wide Water Quality Report:

After the West Central Phoenix area became a State Superfund site in 1987, ADEQ conducted an investigation to identify the type and extent of contamination in the groundwater and identified facilities that may have caused the contamination. The results of this investigation were published in the 1989 Phase I Report.

The 1989 area-wide groundwater investigation was based on water quality information from existing wells, primarily large, deep City of Phoenix drinking water wells and Salt River Project irrigation wells that are not currently in use. These wells pumped water from both the Upper and Middle Alluvial Units (see Figure 3).

Since 1989, many facilities in the north and central portions of the project area have conducted investigations, either as part of the State Superfund program or some other program within ADEQ. Shallow monitor wells that pump water only from the Upper Alluvial Unit have been installed at many of these facilities (such as Layke and the City of Phoenix Glenrosa Service Center).

In 1992, ADEQ collected the groundwater data from all of these facility-specific investigations and installed additional shallow monitor wells in the north and central portions of the project area where there was no data. The water quality data from these shallow wells was compiled and is being evaluated. A report, by ADEQ, will be available to the public by late June 1994.

Since 1987, very few deep wells have been installed in the project area. There is not enough information to evaluate groundwater contamination in the Middle and Lower Alluvial Units.

Southeast Area Investigation:

Groundwater contamination, primarily PCE, has also been detected in the southeast portions of the project area. This PCE contamination appears to be separate from contamination in the north-central part of the West Central Phoenix project area.

ADEQ is conducting a preliminary investigation to identify the type and extent of contamination in the groundwater and to identify facilities that may have caused the contamination. Information obtained during this investigation will be discussed in a report scheduled to be completed in October 1994.

WHAT EFFECT DOES THIS HAVE ON MY PROPERTY?

Under Arizona law, residential property owners are not responsible for cleanup costs of pollution on or beneath their property that migrated from off-site. EPA also has an informal policy of not holding residential property owners liable for such contamination.

A real estate agent in the state of Arizona is obligated by law to disclose any material fact known to the seller that may influence a decision to buy a home. The fact that a home is located at a Superfund site might be considered a material fact. Generally

speaking, if groundwater contamination causes no adverse problems at the surface, it should have no effect on the value of the property.

FOR MORE INFORMATION:

You can review documents related to the West Central Phoenix WQARF site at:

Arizona Department of
Environmental Quality
WQARF File Coordinator
3033 N. Central Ave.
Seventh Floor
Phoenix, Arizona 85012
(602) 207-4190
Open: Mon.—Fri. 8 a.m.—5 p.m.

Or call the Arizona Department of Environmental Quality Superfund Hotline at 207-4360.

YOU'RE INVITED TO AN OPEN HOUSE TO LEARN MORE:

Thursday, June 23
5:30-8:30 p.m.

Community Room at Maryvale Mall
51st Avenue and Indian School Road

The Community Room is at the southeast corner of the mall. The doors to the Community Room face 51st Avenue (east). The "Community Room" sign is above the entrance.

Scientists and engineers from the Arizona Department of Environmental Quality and the Arizona Department of Health Services will be on hand to talk with you and answer any questions you may have.

(Note: A Spanish translator will be available.)

GLOSSARY

Aquifer: Water-bearing soil or rock beneath the ground's surface that can store and supply groundwater to wells and springs.

CERCLA: Comprehensive Environmental Response, Compensation, and Liability Act or "Superfund." CERCLA, also known as the federal "Superfund" law, was passed in 1980. CERCLA established a program to (1) identify sites where hazardous substances have been, or might be, released into the environment; (2) ensure that these sites are cleaned up by the responsible parties or the government; (3) evaluate damages to natural resources; and (4) create a claims procedure for parties who have cleaned up sites to recover their costs from a responsible party or parties.

Cleanup: Actions taken that deal with a release or threat of a release of a hazardous substance that could affect people or the environment. The term "cleanup" is sometimes used interchangeably with the terms remedial action, removal action, response action, remedy, remediation or corrective action.

Cost Recovery: A legal process where responsible parties can be required to pay back the state for money it spends on any investigative and/or cleanup actions.

Drywell: A bored, drilled or driven shaft or hole whose depth is greater than its width and which is designed and constructed specifically for the disposal of storm water.

Facility: Under CERCLA, the term "facility" includes any place, site, or area where a hazardous substance has been deposited, stored, disposed of, placed or otherwise came to be located.

Groundwater: Water found beneath the earth's surface that fills pores between materials such as sand, clay or gravel. In aquifers, groundwater occurs in sufficient quantities that it can be used for drinking water, irrigation and other purposes.

Hazardous Substance: Any element, compound, mixture, solution, or substance listed as a "hazardous substance" under CERCLA. Under CERCLA, tetrachloroethylene (PCE), trichloroethylene (TCE), and 1,1-dichloroethylene (1,1-DCE) are listed hazardous substances.

Maximum Contaminant Level (MCL): The maximum permissible level of a contaminant in water delivered to any user of a public water system. MCLs are enforceable standards.

Micrograms Per Liter ($\mu\text{g/L}$)/Parts Per Billion (ppb): Units commonly used to express low concentrations of contaminants. For example, 1 ounce of TCE in one billion ounces of water is 1 $\mu\text{g/L}$ or ppb. If one drop of TCE is mixed in a competition-size swimming pool, the water will contain about 1 $\mu\text{g/L}$ or ppb of TCE.

Monitoring wells: Special wells drilled at specific locations on or off a site where groundwater can be sampled at selected depths and studied to determine such things as the direction in which groundwater flows and the types and amounts of contaminants present.

Plume: Describes the shape of the contaminant discharge in the groundwater, determined by the sampling of monitoring wells.

Responsible Party (RP): Those parties identified by ADEQ as liable under CERCLA for cleanup costs. RPs may include generators and present or former owners/operators of certain facilities or real property where hazardous substances have been stored, treated, and/or disposed of. PRPs are Potentially Responsible Parties.

Remedial Investigation/Feasibility Study (RI/FS): A two-phase investigation conducted by RPs or ADEQ to investigate the scope of contamination (RI) and determine the remedial alternatives (FS) which may be implemented to clean up the site. A RI/FS requires extensive technical studies that may include soil and groundwater sampling and analysis both on the property and in adjoining areas that also may be contaminated. The objective of the RI/FS is to gather sufficient data to evaluate and select the most appropriate cleanup alternative for the site.

Soil Vapor Extraction: Soil vapor extraction is a commonly used technique for cleaning up contaminated soils. Soil vapor extraction draws air through contaminated soils and the contaminants are transferred to the air. The contaminated air is then treated or discharged, depending on the amount and type of contamination present.

WQARF: Water Quality Assurance Revolving Fund. A program established by the Arizona State legislature to (1) perform statewide surface and groundwater quality monitoring; (2) perform health effects studies, including epidemiological studies and risk assessments; (3) perform emergency remedial actions; and (4) conduct long-term remedial action programs. The WQARF program is funded with state monies, civil and criminal penalties, and funds recovered from RPs.

MAILING LIST COUPON—WEST CENTRAL PHOENIX PROJECT

If you would like to receive future updates about the West Central Phoenix Project, please return this coupon and you will be added to the project's mailing list.

Name: _____ Telephone: _____

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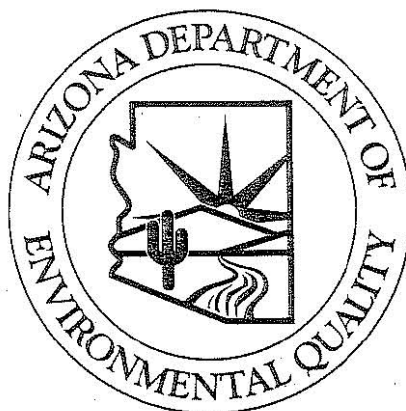
If you have a well in your backyard or somewhere else on your property, or know of a private well in the area of the groundwater pollution and you suspect that it is not registered with the Department of Water Resources, please call 207-4360.

You may leave a message in English or Spanish. Someone will call you back as soon as possible.

**YOU'RE INVITED
TO AN OPEN HOUSE
TO LEARN MORE:**

Thursday, June 23
5:30-8:30 p.m.

See inside for details.



Public Affairs
Arizona Department of Environmental Quality
3033 North Central Avenue
Phoenix, Arizona 85012



*Este documento se puede
obtener en español llamando
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The Arizona Department of Environmental Quality shall preserve, protect and enhance the environment and public health, and shall be a leader in the development of public policy to maintain and improve the quality of Arizona's air, land and water resources.



Verano '94

Usted Está
Invitado A Un
"Open House":

jueves, 23 de
junio de 1994
5:30-8:30 p.m.

Salón
Comunitario del
Maryvale Mall,
Avenida 51 y Calle
Indian School

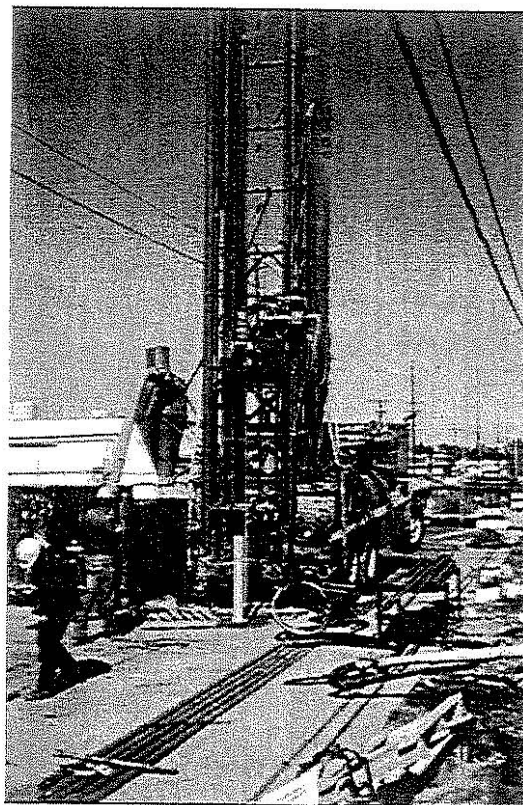
Vea la página
6 para más
detalles.

DEPARTAMENTO DE CALIDAD AMBIENTAL DE ARIZONA EL PROYECTO DEL ÁREA CENTRAL OESTE DE PHOENIX DEL SUPERFONDO ESTATAL

INFORMACIÓN SOBRE LA COMPAÑÍA F&B MFG. CO. Y OTRAS INVESTIGACIONES

Por varios años, el Departamento de Calidad Ambiental de Arizona (ADEQ) ha estado investigando la contaminación del subsuelo y el agua subterránea en el Área Central Oeste de Phoenix causada por disolventes industriales. ADEQ ha estado trabajando con propietarios o compañías que han estado conduciendo investigaciones en sus propiedades. Este folleto provee información sobre la investigación que se está llevando a cabo en la propiedad de la compañía F&B Mfg. Co. (F&B), bajo la dirección del ADEQ (vea la Figura 1). F&B fue la primera compañía en llegar a un acuerdo legal con el ADEQ para conducir una extensa investigación ambiental en su propiedad.

Este folleto también incluye una introducción al reporte que presentará la más reciente información sobre la calidad del agua subterránea en el área. También, este folleto provee un breve recuen-



Esta fotografía fue tomada durante la perforación del pozo de observación MW-4 en la propiedad de la compañía de F&B Mfg. Co. en el Área Central Oeste de Phoenix (vea las páginas 2 y 3 para más detalles).

to sobre algunas de las otras investigaciones que se están llevando a cabo en otras propiedades en el área. Éstas son: la antigua propiedad de la compañía Rinchem Company, la antigua propiedad de la compañía Van Waters & Rogers, Inc. y la propiedad de la fábrica de la compañía Layke, Inc. (vea la Figura 1).

¿QUÉ ES LO QUE FABRICA F&B?

F&B fabrica piezas aeroespaciales y de la aviación.

La propiedad de F&B se encuentra localizada en el 4316 al norte de la Avenida 39 en Phoenix. F&B ha estado operando esta fábrica desde 1967 y, en el presente, emplea a más de 125 personas. F&B fabrica piezas aeroespaciales y de la aviación,

¿QUÉ ES UN "OPEN HOUSE"?

Un "Open House" es una reunión que le da a los ciudadanos la oportunidad de hablar individualmente con empleados del Departamento de Calidad Ambiental de Arizona (ADEQ) y otras agencias. La reunión es casual y no hay presentaciones formales.

así como una variedad de artículos médicos y del consumidor.

¿QUÉ HAN ENCONTRADO LAS INVESTIGACIONES EN LA PROPIEDAD DE F&B?

PCE es la sustancia química principal que se encuentra en el subsuelo y el agua subterránea. Las concentraciones de PCE en el agua subterránea debajo de la propiedad sobrepasan las normas de salud del agua potable establecidas por la Agencia de Protección Ambiental de los Estados Unidos (EPA) y el estado de Arizona.

Durante el proceso de manufactura, las piezas metálicas son sumergidas en un "vapor degreaser," o estructura metálica rectangular que contiene un disolvente de limpieza (vea la Figura 2). Entre 1969 y 1987, F&B utilizó tetracloroetileno (PCE) como el disolvente para remover grasa. PCE es comúnmente usado en las tintorerías. En 1987, F&B cambió a 1,1,1-tricloroetano (TCA), un disolvente que causa menos problemas ambientales.

En 1989, ADEQ tomó muestras del subsuelo de la propiedad y de sus vapores.

Las muestras de los vapores detectaron PCE, TCA, tricloroetileno (TCE), 1,1-dicloroetileno (1,1-DCE) y benceno. Las muestras del terreno encontraron PCE y tolueno. Debido a esta investigación, ADEQ le pidió a F&B que continuara con más estudios.

En noviembre de 1990, F&B tomó 30 muestras de los vapores en el subsuelo de la propiedad. En febrero de 1991, F&B tomó muestras superficiales del terreno en ocho localidades. En marzo y abril de 1991, F&B perforó 21 agujeros en el terreno para obtener muestras adicionales. Los resultados de cada una de estas investigaciones fueron resumidos en reportes que están disponibles en las oficinas del ADEQ. En abril de 1991, se descubrió que el "vapor degreaser" tenía una grieta por donde el PCE se filtró debajo del edificio.

En octubre de 1991, F&B instaló un pozo de observación de 230 pies de profundidad (MW-1), cerca del "vapor degreaser" (vea la Figura 2). ADEQ y F&B tomaron muestras del agua subterránea a varias profundidades. Las muestras encontraron que el agua subterránea debajo del "vapor degreaser" contenía altas concentraciones de PCE (710–110,000 micro-

gramos por litro, o $\mu\text{g/L}$). Otros contaminantes, como el TCE y TCA, también fueron detectados en las muestras, pero en concentraciones mucho más bajas (menos de 8 $\mu\text{g/L}$).

El nivel seguro para el PCE en agua potable (Nivel de Contaminación Máximo, o MCL) es 5 $\mu\text{g/L}$.

En mayo de 1993, F&B instaló un segundo pozo de observación de 500 pies de profundidad para investigar si la contaminación del PCE pasaba de los 230 pies de profundidad (vea la Figura 2). Altas concentraciones de PCE (510–1,200 $\mu\text{g/L}$) fueron detectadas entre 230 pies y 500 pies de profundidad. TCE y TCA también fueron detectados, pero en concentraciones mucho más bajas (menos de 5 $\mu\text{g/L}$). Todavía no se sabe hasta qué profundidad llega la contaminación del PCE, ni se sabe si otras fuentes han contribuido a la contaminación y cuánto.

¿QUÉ ESTÁ HACIENDO F&B AHORA?

Bajo la dirección del ADEQ, F&B continúa acumulando información sobre las concentraciones de los contaminantes en el agua subterránea debajo y fuera de la propiedad.

Desde principios de 1992, F&B ha estado conduciendo una investigación conocida como Investigación Remedial/Estudio de Factibilidad (RI/FS). El plan de trabajo que describe cómo es que el RI/FS se llevará a cabo está disponible en las oficinas del ADEQ.

Los objetivos principales del RI/FS son el de evaluar la magnitud de la contaminación en el subsuelo y el agua subterránea (principalmente el PCE), y determinar la manera más apropiada para limpiar el sitio.

F&B ha instalado otros dos pozos de observación de 500 pies de profundidad (MW-3 y MW-4) para conocer más sobre la contaminación del agua subterránea

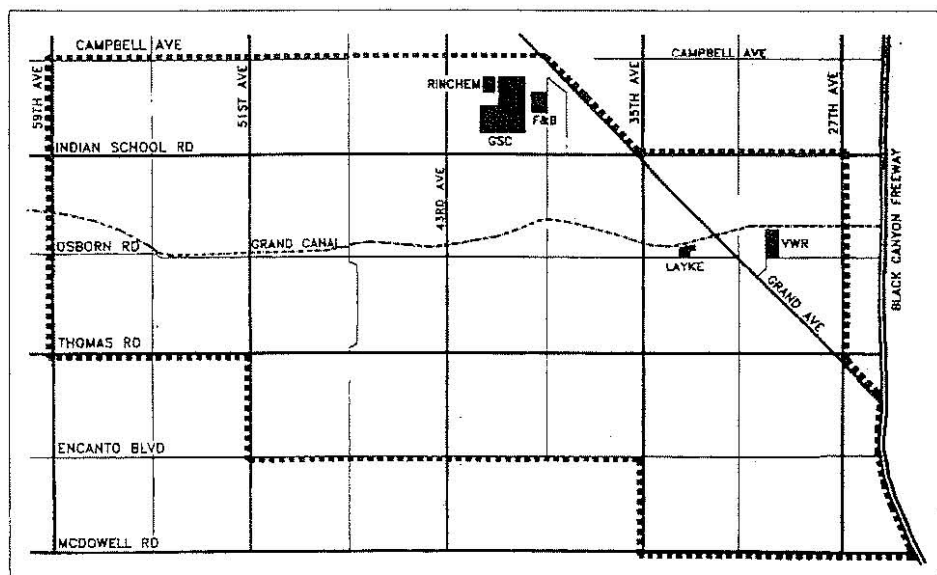


Figura 1: El mapa demuestra los límites del Área Central Oeste de Phoenix y las localizaciones de las propiedades discutidas en este folleto. (Nota: Estos son los límites correctos del Área Central Oeste de Phoenix. Los límites presentados en el folleto anterior fueron impresos erróneamente.)

(vea la Figura 2). Estos dos pozos fueron analizados en febrero de 1994 y PCE fue otra vez detectado en concentraciones que exceden el MCL. Sin embargo, las concentraciones de PCE en estos dos pozos fueron mucho menores que las encontradas en los pozos MW-1 y MW-2, cercanos al "vapor degreaser." En abril de 1994, F&B tomó muestras de agua de sus cuatro pozos de observación y volverá a tomar muestras de agua en julio y octubre. Durante todos los meses del 1994, F&B estará tomando medidas del nivel del agua subterránea en sus cuatro pozos de observación para tener un total entendimiento sobre el movimiento de agua subterránea en el área.

Durante el principio del RI/FS, F&B entrevistó a empleados de la compañía (antiguos y presentes) a cerca de cómo han sido usadas y dispuestas las sustancias químicas en la propiedad. Además, F&B tomó muestras de terreno en otra área del edificio (debajo del "Clean Room") y cerró dos pozos secos. F&B continúa en la búsqueda de otras fuentes de contaminación en otras propiedades industriales del área.

F&B le está devolviendo al estado de Arizona los gastos de investigación que ha incurrido en el pasado y por los que se incurran en el futuro.

¿QUÉ ESTARÁ HACIENDO F&B DURANTE LOS PRÓXIMOS 18 MESES?

Los métodos de tratamiento están bajo evaluación y la limpieza del sitio empezará a principios de 1995.

F&B está evaluando los diferentes métodos para limpiar el subsuelo contaminado debajo del "vapor degreaser." Las alternativas de limpieza son limitadas debido a que la contaminación está debajo del edificio de la compañía. Una de las opciones de limpieza es el método conocido como

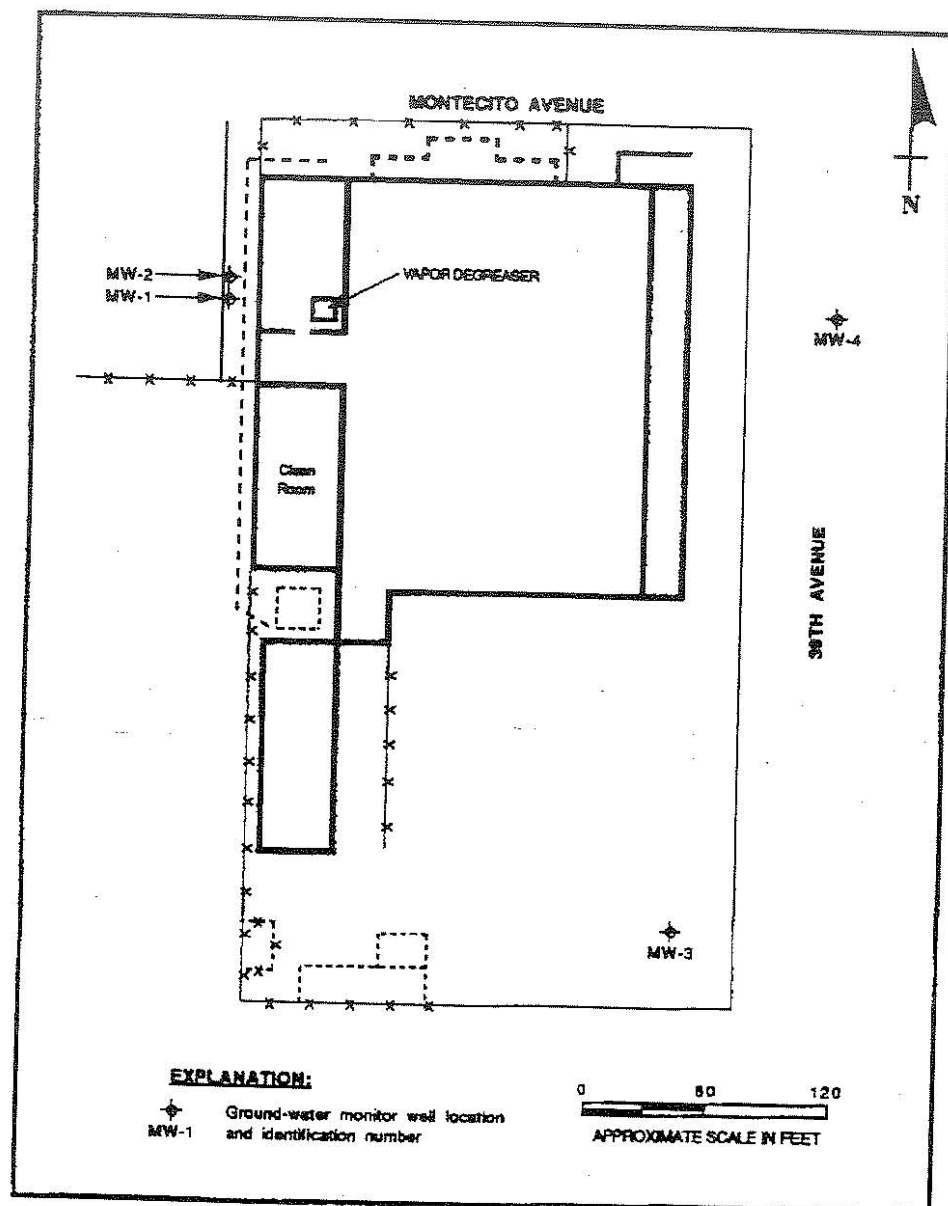


Figura 2: El diagrama presenta la propiedad de la compañía F&B Mfg. Co. y las localizaciones de los cuatro pozos de observación instalados hasta el momento.

extracción de vapor del subsuelo ("soil vapor extraction"). F&B preparará un reporte que describirá los métodos de limpieza más factibles para que ADEQ los evalúe. De acuerdo con el plan presente, la limpieza del terreno comenzará a principios de 1995 y continuará por varios años.

¿HAY ALGUNA POSIBILIDAD DE QUE LA GENTE ESTÉ EXPUESTA AL PCE QUE SE ENCUENTRA EN EL SUBSUELO DE LA PROPIEDAD DE F&B?

No. La propiedad de F&B se encuentra en una parte vieja e industrial del Área Central Oeste de Phoenix. El vecindario más cercano se encuentra a media milla de distancia.

El terreno que ha sido contaminado de PCE se encuentra debajo del edificio de la compañía y cualquier contacto humano con ese terreno es poco probable.

¿ES SEGURA EL AGUA QUE BEBEMOS?

Sí. La contaminación del agua subterránea que existe debajo de la propiedad de F&B no tiene nada que ver con los abastecimientos de agua potable que actualmente proveen agua en el área.

La Ciudad de Phoenix provee agua potable a las residencias y comercios. En los 1980s, Phoenix cerró cuatro pozos de agua potable en el área debido a la contaminación. Actualmente, el agua potable proviene de agua superficial y de agua subterránea de otras partes del área metropolitana, no de agua subterránea del Área Central Oeste de Phoenix.

La contaminación del agua subterránea representa una amenaza a largo plazo a los futuros abastecimientos de agua potable y debe ser tratada para evitar que se propague. Por esto, ADEQ está trabajando para investigar, controlar y remover la contaminación que existe en el área bajo la ley del Fondo Revolvente Para La Asegurancia De La Calidad Del Agua (WQARF), también conocida como Superfondo Estatal.

¿Y QUÉ SOBRE EL RIESGO A CÁNCER EN EL ÁREA?

No se ha encontrado una conexión entre la contaminación del agua subterránea y los casos de cáncer en el área.

El tema sobre una posible conexión entre la contaminación del agua subterránea y el llamado "grupo de cáncer" de Maryvale se mencionó por primera vez en los 1980s. Este tema originó después de que se reportaron, en una escuela local, un alto número de casos de leucemia infantil.

Una investigación del ADHS encontró

que, entre 1965 y 1986, la proporción de casos de leucemia infantil en el Área Central Oeste de Phoenix era levemente elevada, comparada con el resto de los casos en el Condado de Maricopa. Un estudio más reciente conducido por el ADHS que cubre el período de tiempo entre 1987 y 1990 indicó que las proporciones ya no eran elevadas. Hasta el momento, no se ha encontrado una asociación con la contaminación del agua subterránea.

Actualmente, ADHS está conduciendo un estudio que determinará si factores ambientales están asociados con la proporción elevada de leucemia infantil detectada anteriormente en el área. Se espera que este estudio se complete a principios del otoño de 1994.

¿QUÉ OTRAS PROPIEDADES ESTÁN CONDUCIENDO INVESTIGACIONES EN EL ÁREA CENTRAL OESTE DE PHOENIX?

ADEQ está trabajando con otros propietarios o compañías que conducen las investigaciones en sus propiedades bajo la dirección del ADEQ.

ADEQ ha investigado docenas de propiedades en el área y continúa buscando otras propiedades que puedan ser fuentes de la contaminación. Otras propiedades conduciendo investigaciones bajo la dirección del ADEQ son:

La antigua propiedad de la compañía Rinchem Company:

Entre 1982 y 1993, Rinchem operó un negocio de almacén y distribución de productos químicos en el 4115 al oeste de la Avenida Turney en Phoenix (vea la Figura 1). Los productos químicos eran guardados dentro de un almacén y fuera de él en tanques de almacenaje sobre tierra (batería de tanques).

Desde el 1988, 1,1-DCE ha sido detectado en el agua subterránea de pozos de observación que se encuentran en la antigua propiedad de Rinchem y en los alrededores. Estos pozos fueron instalados por la Ciudad de Phoenix como parte de una investigación ambiental en el Centro de Servicio de Glenrosa de la Ciudad de Phoenix ("Glenrosa Service Center").

En 1991, ADEQ tomó muestras del subsuelo de la propiedad y de sus vapores. Las muestras de los vapores indicaron la presencia de TCE, PCE, 1,1-DCE, TCA y 1,1-dicloroetano (1,1-DCA). Las muestras del terreno encontraron 1,1-DCE, TCA, 1,1-DCA, tolueno, etil-benceno, xileno y acetona. La presencia de contaminantes en el subsuelo y sus vapores, y la presencia de contaminantes en los pozos de observación en la propiedad y en los alrededores parece indicar que la contaminación se origina cerca de la antigua propiedad de Rinchem.

En 1993, los dueños de la antigua propiedad de Rinchem acordaron conducir una investigación en su propiedad. La investigación incluye la toma de muestras del subsuelo y de sus vapores, y muestras del agua subterránea. Las áreas bajo investigación incluyen: los pozos secos, la batería de tanques, el área de mezcla y empaque de productos químicos, y el área de almacenaje de barriles. ADEQ examinó el plan inicial y recomendó cambios. Se espera que el plan sea aprobado dentro de poco y que la investigación comience en junio de 1994. La investigación será dirigida por el ADEQ.

La antigua propiedad de la compañía Van Waters & Rogers, Inc.:

Entre 1957 y 1970, Van Waters & Rogers, Inc. (VW&R) operó un negocio de distribución de productos químicos en el 2930 al oeste de la Calle Osborn (vea la Figura 1). En 1970, VW&R mudó sus operaciones a su instalación actual, al sur.

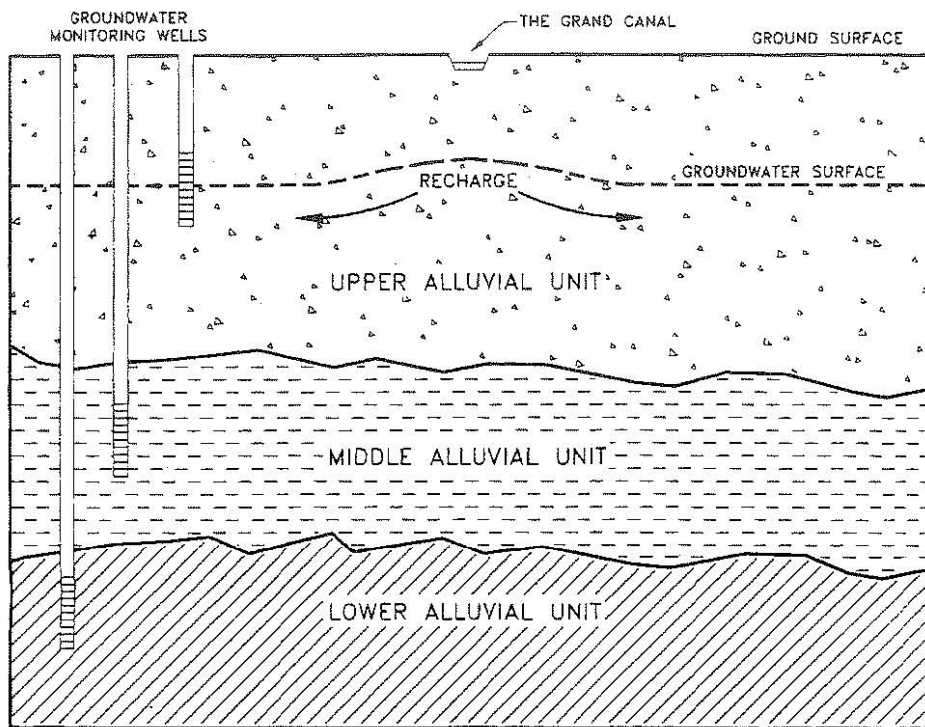


Figura 3: El diagrama presenta los tres acuíferos diferentes que están presentes debajo del Área Central Oeste de Phoenix. Estos tres acuíferos se componen de arena, grava y arcilla. La superficie del agua subterránea se encuentra en la Unidad Aluvial Superior y continúa a través de las tres unidades. Los tres pozos de agua presentados a la izquierda extraen agua de diferentes unidades, dependiendo de cuán profundos son perforados.

de la Avenida 45 en Phoenix. El actual dueño y ocupante de la propiedad en cuestión es Century Wheel and Rim, un distribuidor de piezas de transporte y carga. Actualmente, VW&R es parte de la compañía Univar Corporation.

De acuerdo con los registros históricos e información obtenida por el ADEQ, VW&R almacenó una variedad de productos químicos en la propiedad que incluyeron: ácidos, bases, disolventes, pesticidas y herbicidas. De acuerdo con las fotografías aéreas históricas obtenidas por el ADEQ, la propiedad tenía dos tanques de almacenamiento sobre tierra, numerosas áreas de almacenaje de barriles y áreas descoloridas en el terreno.

En 1993, ADEQ tomó muestras del subsuelo de la propiedad y de sus vapores. Las muestras de los vapores indicaron la presencia de TCE, PCE, 1,1-DCE y TCA. Las muestras del terreno encontraron TCE, PCE, TCA y pesticidas, así como

otros compuestos químicos.

En 1994, Univar Corporation (la compañía madre de VW&R) acordó conducir una investigación en su antigua propiedad. La investigación incluye la toma de muestras del subsuelo y de sus vapores, y muestras del agua subterránea. El plan de trabajo para la primera fase de la investigación (la toma de muestras de los vapores del subsuelo) fue sometido al ADEQ para ser evaluado y aprobado. La toma de muestras de los vapores del subsuelo ayudará a Univar y al ADEQ a determinar en dónde se tomarán las muestras del terreno y el agua subterránea durante las siguientes fases de la investigación. ADEQ examinó el plan inicial y recomendó cambios. Se espera que el plan sea finalizado pronto y que la investigación comience en junio de 1994. La investigación será dirigida por el ADEQ.

La propiedad de la compañía Layke, Inc.:

La fábrica, que se encuentra en el 3330

al oeste de la Calle Osborn, ha estado en operación desde 1967 (vea la Figura 1). Layke, Inc. fabrica piezas aeroespaciales, de aviación, electrónicas y otras.

Entre 1975 y 1983, Layke utilizó TCE como un agente removedor de grasa. Un tanque de almacenamiento subterráneo que contenía aceite usado se contaminó con TCE. Este tanque se derramó y causó que el terreno se contaminara. El agua del pozo de observación que se instaló en la propiedad contiene concentraciones de TCE. El tanque se removió de la propiedad.

Layke, Inc. instalará un sistema de extracción de vapor del subsuelo para remover la contaminación de petróleo y TCE en el subsuelo de la propiedad. El sistema de extracción está diseñado para prevenir que los contaminantes lleguen al agua subterránea debajo de la propiedad. El diseño del sistema ha sido evaluado por el ADEQ.

¿QUÉ OTRAS INVESTIGACIONES SE ESTÁN LLEVANDO A CABO?

Mientras propietarios o compañías están conduciendo investigaciones en sus propiedades bajo la dirección del ADEQ, ADEQ también está investigando la contaminación del agua subterránea en el área entera.

Los objetivos principales del ADEQ en las investigaciones del agua subterránea en el área entera son: 1) Identificar el tipo y la magnitud de la contaminación del agua en el área; 2) Determinar si la contaminación que se origina en diferentes propiedades se mezcla; e 3) Identificar otras propiedades que también puedan ser fuentes de la contaminación. Las más recientes investigaciones que el ADEQ ha conducido en el área entera son:

El Reporte Sobre la Calidad del Agua de 1994 :

Después de que en 1987 el Área Central

Oeste de Phoenix se convirtió en un área del Superfondo Estatal, ADEQ llevó a cabo una investigación para identificar el tipo y la magnitud de la contaminación del agua subterránea, y para identificar otras propiedades que pudieran ser fuentes de la contaminación. Los resultados de esta investigación fueron publicados en 1989 en el Reporte de la Fase I.

La investigación sobre la calidad del agua del 1989 se basó, principalmente, en información obtenida de pozos de agua profundos que existían en el área, y que ya no están en uso [pozos de la Ciudad de Phoenix y del Proyecto del Río Salado (SRP)]. Estos pozos extraen agua de dos acuíferos subterráneos: la Unidad Aluvial Superior y la Unidad Aluvial Intermedia (vea la Figura 3).

Desde 1989, muchas de las propiedades en las partes norte y centrales del Área Central Oeste han conducido investigaciones, ya sea como parte del programa del Superfondo Estatal, o de algún otro programa del ADEQ. En muchas de estas propiedades se han instalado pozos de observación poco profundos que extraen agua de la Unidad Aluvial Superior (como por ejemplo, en Layke y en el Centro de Servicio de Glenrosa).

En 1992, ADEQ juntó la información sobre el agua subterránea de cada una de las investigaciones en las propiedades del área, e instaló pozos de observación poco profundos en otras áreas donde no existía información. La información sobre la calidad del agua fue compilada y está siendo evaluada. El reporte del ADEQ estará disponible al público a finales de junio de 1994.

Desde 1987, han sido muy pocos los pozos de agua profundos que se han instalado en el área. Actualmente, no existe suficiente información para evaluar la contaminación del agua subterránea en las Unidades Aluviales Intermedia e Inferior.

La Investigación del Área Sureste:

El contaminante PCE también ha sido detectado en el agua subterránea en la parte sureste del Área Central Oeste de Phoenix. Esta contaminación parece ser distinta a la contaminación en la parte central-norte del Área Central Oeste.

ADEQ está conduciendo una investigación preliminar para identificar el tipo y la magnitud de la contaminación en el agua, y para identificar propiedades que pudieran haber causado la contaminación. La información que se obtenga durante esta investigación será publicada en un reporte en octubre de 1994.

¿QUÉ EFECTO TIENE ESTO EN MI PROPIEDAD?

Bajo la ley de Arizona, los dueños residenciales no son responsables de la limpieza de la contaminación en o debajo de su residencia, si proviene de otro sitio. EPA también tiene una política informal de no mantener a los dueños residenciales responsables de la contaminación.

Un vendedor de bienes raíces en el estado de Arizona está obligado por ley a revelar a un comprador cualquier dato material que pueda influenciar la decisión de comprar una propiedad. El hecho de que una propiedad se encuentre en un área del programa Superfondo puede ser considerado un dato material. Generalmente, si la contaminación del agua subterránea no causa ningún problema adverso en la superficie, no debe de causar ningún efecto en el valor de la propiedad.

PARA MÁS INFORMACIÓN:

Usted puede examinar los documentos del Área Central Oeste de Phoenix en el:

Departamento de Calidad Ambiental
Coordinadora de Archivos de WQARF
3033 al norte de la Avenida Central
Séptimo Piso
Phoenix, Arizona 85012
(602) 207-4190
Abierto: lunes-viernes, 8 a.m. - 5 p.m.

O llame al "Superfund Hotline" del Departamento de Calidad Ambiental de Arizona al 207-4360.

USTED ESTÁ INVITADO A UN "OPEN HOUSE":

jueves, 23 de junio de 1994
5:30 p.m. - 8:30 p.m.

Salón Comunitario del Maryvale Mall,
Avenida 51 y Calle Indian School

El Salón Comunitario se encuentra en la esquina sureste del Maryvale Mall. Las puertas del salón abren hacia la Avenida 51 (este). El letrero que dice "Community Room" se encuentra sobre la entrada.

Científicos e ingenieros del Departamento de Calidad Ambiental y del Departamento de Servicios de Salud de Arizona estarán disponibles para hablar con usted y contestar sus preguntas.

(Nota: Un traductor estará disponible)

GLOSARIO

Acuífero: Una formación geológica subterránea de materiales como tierra y rocas, que puede almacenar y suministrar agua a pozos y manantiales.

Agua subterránea: Agua bajo la superficie de la tierra que llena los espacios entre materiales como la arena, arcilla y grava. En los acuíferos, el agua subterránea se encuentra en cantidades suficientes como para ser bebida, usada para irrigación y otros propósitos.

CERCLA: Acto de Respuesta Ambiental Comprensiva, de Compensación y Responsabilidad, o "Superfondo." CERCLA, también conocido como la ley federal del "Superfondo," fue promulgada en 1980. CERCLA estableció un programa para: (1) identificar sitios donde sustancias peligrosas hayan sido o puedan haber sido dispuestas en el medio ambiente; (2) asegurar que estos sitios son limpiados por los partidos responsables o el gobierno; (3) evaluar los daños causados a los recursos naturales; y (4) crear un procedimiento para que las entidades que hayan limpiado la contaminación puedan recobrar sus gastos de un partido o partidos responsables.

Extracción de Vapor del Subsuelo: La extracción de vapor del subsuelo es una técnica comúnmente usada para limpiar terrenos contaminados. La extracción de vapor del subsuelo aspira aire a través del terreno contaminado y transfiere los contaminantes al aire. El aire contaminado es entonces tratado o descargado, dependiendo de las cantidades y tipos de contaminantes presentes.

Investigación Remedial/Estudio de Factibilidad (RI/FS): Una investigación conducida por RPs o ADEQ en dos fases, con el propósito de investigar la extensión de la contaminación (RI) y determinar las alternativas remediales (FS) que puedan ser utilizadas para limpiar el sitio. Un RI/FS requiere extensos estudios técnicos que pueden incluir la toma y análisis de muestras del terreno y agua subterránea, tanto en la propiedad como en las áreas cercanas en donde también haya contaminación. El objetivo del RI/FS es obtener la información suficiente para evaluar y seleccionar la alternativa de limpieza más apropiada para el sitio.

Limpieza ("Cleanup"): Acciones que se llevan a cabo para tratar con las sustancias peligrosas que han sido emitidas o bajo amenaza de ser emitidas, que pueden afectar al pueblo y el medio ambiente. El término "limpieza" es algunas veces intercambiado con los términos "acción remedial," "acción de removido," "acción de respuesta," "remedio," "remediación," o "acción correctiva."

Microgramos por Litro ($\mu\text{g/L}$)/Partes por Billón (ppb): Unidades comúnmente usadas para expresar concentraciones bajas de contaminantes. Por ejemplo, 1 onza de TCE en un billón de onzas de agua es 1 $\mu\text{g/L}$ o ppb. Si una gota de TCE es mezclada en una alberca de competencia, el agua tendrá aproximadamente 1 $\mu\text{g/L}$ o ppb de TCE.

Nivel de Contaminación Máximo (MCL): El nivel máximo permitido de un contaminante en agua potable que se distribuye a cualquiera que use un sistema de agua público. MCLs son estándares o normas que se tienen que cumplir.

Partido Responsable (RP): Las entidades identificadas por el ADEQ como responsables por los gastos de limpieza bajo la ley de CERCLA. RPs pueden incluir generadores y dueños/operadores presentes o antiguos de ciertas propiedades, en donde sustancias peligrosas han sido almacenadas, tratadas y/o dispuestas. PRPs son conocidos como Partidos Responsables Posibles.

Pozos de Observación ("Monitor Wells"): Pozos de agua especialmente contruidos en sitios específicos, dentro o fuera de una propiedad, en donde se pueden tomar muestras del agua subterránea a profundidades selectas, para determinar cosas como la dirección del flujo del agua subterránea, y los tipos y cantidades de contaminantes presentes.

Pozo seco ("Drywell"): Un pozo en la tierra en que su profundidad es mayor que su anchura, y está designado y construido específicamente para disponer de agua de lluvia.

Sustancia Peligrosa: Cualquier elemento, compuesto, mezcla, solución, o sustancia listada como una "sustancia peligrosa" bajo la ley de CERCLA. De acuerdo con CERCLA, tetracloroetileno (PCE), tricloroetileno (TCE), y 1,1-dicloroetileno (1,1-DCE) son sustancias peligrosas.

WQARF: Fondo Revolvente Para La Asegurancia De La Calidad Del Agua. Un programa establecido por la legislatura del estado de Arizona para: (1) conducir investigaciones de la calidad del agua subterránea y superficial a través del estado; (2) conducir estudios sobre los efectos a la salud, incluyendo estudios epidemiológicos y estudios de riesgo; (3) conducir acciones remediales de emergencia; y (4) conducir acciones remediales a largo plazo. El programa de WQARF obtiene sus fondos a través del estado, penalidades civiles y criminales, y fondos recobrados de los RPs.

CUPÓN PARA LISTA DE CORREO—PROYECTO DEL ÁREA CENTRAL OESTE DE PHOENIX

Si usted desea recibir la más reciente información sobre el proyecto del Área Central Oeste de Phoenix, por favor devuelva este cupón y usted será incluido en la lista de correo del proyecto.

Nombre: _____ Teléfono: _____

Dirección: _____

Organización/Afiliación (si alguna): _____

Devuelva a: Ana Vargas, ADEQ, 3033 N. Avenida Central, Phoenix, AZ 85012

NOTICIA OFICIAL ESTADO DE ARIZONA

Si usted tiene un pozo en el patio o en algún otro sitio de su propiedad, o conoce de algún pozo privado en el área de la contaminación del agua subterránea y sospecha que no está registrado con el Departamento de Recursos de Agua, por favor llame al 207-4360. Usted puede dejar un mensaje en inglés o español y alguien le devolverá la llamada tan pronto como pueda.

USTED ESTA
INVITADO A UN
"OPEN HOUSE":

jueves, 23 de junio de 1994
5:30 p.m.—8:30 p.m.
Vea la página 6 para más detalles.



Asuntos Públicos
Departamento de Calidad Ambiental de Arizona
3033 N. Avenida Central
Phoenix, Arizona 85012



Impreso en paper reciclado

El Departamento de Calidad Ambiental de Arizona preservará, protegerá y mejorará el medio ambiente y la salud pública, y será un líder en el desarrollo de la política pública para mantener y mejorar la calidad del aire, el terreno y los recursos de agua de Arizona.



Summer '95

ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY

THE WEST CENTRAL PHOENIX STATE SUPERFUND PROJECT AREA

UPDATE ON INVESTIGATIONS AT THE FORMER RINCHEM AND VAN WATERS & ROGERS FACILITIES

For several years, the Arizona Department of Environmental Quality (ADEQ) has been investigating soil and groundwater contamination from industrial solvents in West Central Phoenix. ADEQ has been working with property owners or businesses conducting investigations at their properties. This newsletter provides detailed information about the investigations being conducted at the former Rinchem and Van Waters & Rogers (VW&R) facilities. Rinchem and VW&R are no longer located at these facilities.

All of the ongoing work in the area is needed to identify the hazardous substances in groundwater and soil, evaluate the risk to public health and the environment, and determine the best way to clean up the contamination.

WHERE IS THE FORMER RINCHEM COMPANY FACILITY LOCATED?

The former Rinchem facility is located near 40th Avenue and Indian School Road.

From 1982 until 1993, Rinchem was located at 4115 West Turney Avenue (see Figure 1) just west of the City of Phoenix's Glenrosa Service Center (GSC). Before 1982, the property was agricultural land.

WHAT TYPE OF BUSINESS DID RINCHEM OPERATE?

Rinchem packaged and mixed chemicals and sold them to customers.

Rinchem was a chemical warehouse and distribution business. They purchased large quantities of chemicals (such as agricultural chemicals, pesticides, and solvents) and packaged them in smaller containers to sell to customers. Rinchem also blended chemicals to make custom mixtures. They stored chemicals inside their warehouse and outside in above-ground storage tanks (a tank farm). A pumping station and railroad line were located on the east side of the facility and were used to ship large quantities of chemicals to and from Rinchem by train. Figure 2 shows Rinchem's former facility.

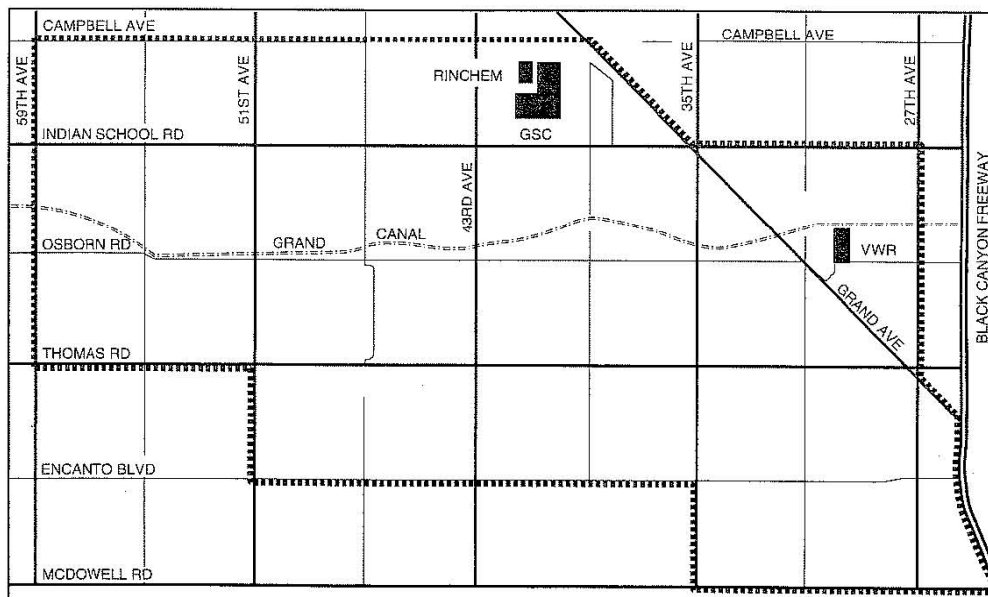


Figure 1: The map shows the boundaries of the West Central Phoenix area and the locations of the facilities discussed in this newsletter.

WHY IS AN INVESTIGATION BEING CONDUCTED AT THE FORMER RINCHEM FACILITY?

Chemicals were detected in soil, soil-gas, and groundwater samples collected at Rinchem.

In 1991, ADEQ collected soil and soil-gas samples at the former Rinchem facility. The soil-gas samples contained trichloroethylene (TCE); tetrachloroethylene (PCE); 1,1-dichloroethylene (1,1-DCE); 1,1,1-trichloroethane (TCA); and 1,1-dichloroethane (1,1-DCA). Soil samples contained 1,1-DCE; TCA; 1,1-DCA; toluene; ethyl benzene; xylene; and acetone.

The City of Phoenix installed a shallow monitor well at the Rinchem facility as part of an investigation at the Glenrosa Service Center. The city has collected groundwater samples from all its wells since 1988. Groundwater from the well at the Rinchem facility, as well as other nearby wells, contained 1,1-DCE.

The results of the soil, soil-gas, and groundwater samples from the monitor well on the Rinchem property indicated that the pollution may be coming from the vicinity of the former Rinchem facility. ADEQ concluded that additional work needed to be done at the site.

THE CURRENT PROPERTY OWNERS MET WITH ADEQ IN 1993 TO DISCUSS AN INVESTIGATION AT THE FACILITY.

In 1993, Phoenix Investors 2 Limited Partnership (Phoenix Investors), the current owners of the Rinchem property, met with ADEQ and agreed to conduct an investigation at the property formerly occupied by Rinchem.

Phoenix Investors agreed to collect soil and soil-gas samples near the drywells and the former tank farm and chemical repackaging areas. They also agreed to collect groundwater samples at the site. ADEQ reviewed the work plan for the sampling activities and recommended changes. ADEQ approved the plan in September 1994 after the changes were made.

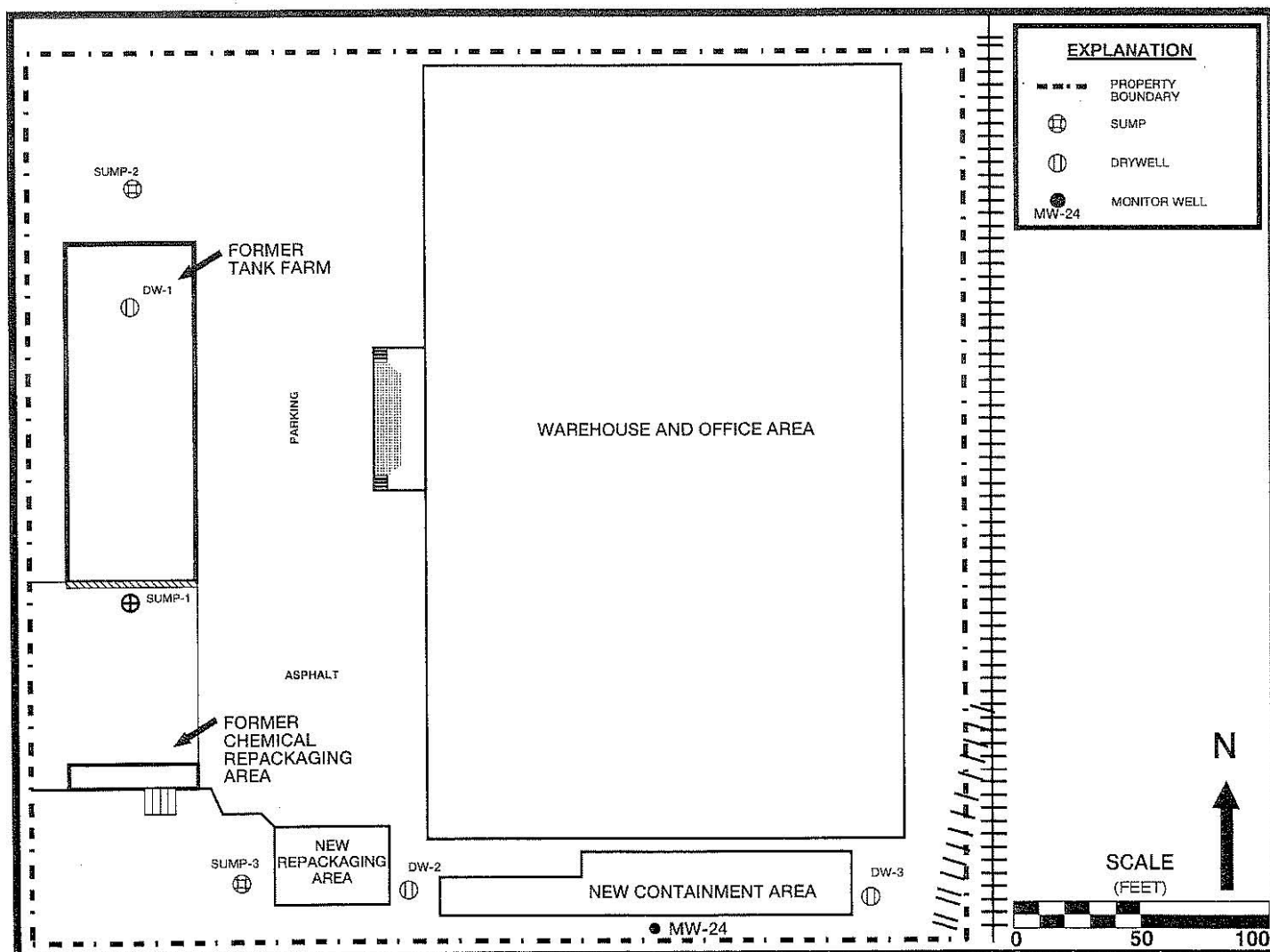


Figure 2: The diagram shows the former Rinchem facility.

WHEN DID THE ADDITIONAL INVESTIGATION AT THE FORMER RINCHEM FACILITY BEGIN?

Soil, soil-gas, and groundwater samples were collected in September and October 1994.

Samples were collected from the warehouse floor in areas where Rinchem stored pesticides, solvents, and other chemicals. Chlorinated solvents (such as PCE; TCE; TCA; or 1,1-DCE) were not detected in any of the samples from the warehouse, and it was decided that no further sampling was needed in the warehouse.

HOW WERE SOIL SAMPLES COLLECTED?

A drill rig was used to drill down and collect soil samples from deep and shallow boreholes.

A drill rig was used to collect soil samples from Rinchem's old drum storage area, the drywells, and the old tank farm and repackaging areas. A drill rig drills down through soils to collect samples deep below the soil's surface. Soil samples were collected from shallow boreholes (approximately 20 feet deep) and deep boreholes (approximately 115 feet deep). When drilling boreholes, the drillers stopped every five feet, and Phoenix Investors' environmental consultant collected soil and soil-gas samples at each interval. In the bottom of the deep boreholes, the driller drove a special tool called a "Hydropunch™" into groundwater, and a water sample was collected.

WHAT CHEMICALS WERE FOUND IN THE SOIL SAMPLES?

Many chemicals, including 1,1-DCE; TCE; PCE; and methylene chloride, were detected in the soil and groundwater samples at Rinchem.

The highest concentrations of soil contaminants were detected at Rinchem's former repackaging area near an old sump.

Chemicals detected in the soil in this area included: 1,1-DCE; 1,1-DCA; PCE; TCE; TCA; methylene chloride; acetone; and methyl ethyl ketone (MEK). Chemicals detected in groundwater samples in the same area included: 1,1-DCE; cis-1,2-DCE; 1,1-DCA; 1,2-DCA; TCE; PCE; acetone; TCA; vinyl chloride; methylene chloride; and trimethylbenzene.

WHAT WILL HAPPEN NEXT AT THE RINCHEM FACILITY?

Monitor wells need to be installed at the former Rinchem facility.

ADEQ and Phoenix Investors will meet to discuss the results of the investigation. Monitor wells should be installed at the property to find out in which direction the groundwater flows and how much, if any, of

the contamination in the groundwater may be coming from the former Rinchem facility.

WHERE IS THE FORMER VW&R FACILITY LOCATED?

The former VW&R facility is located near 29th Avenue and Osborn Road.

VW&R is a chemical distribution firm, which operated a facility at 2930 West Osborn Road from 1957 until 1970 (see Figure 1). In 1970, VW&R moved its operation to the current facility on South 45th Avenue in Phoenix. The 2930 West Osborn Road facility is now owned and occupied by Century Wheel and Rim, a distributor of undercarriage and transportation parts. VW&R is now owned by Univar Corporation.

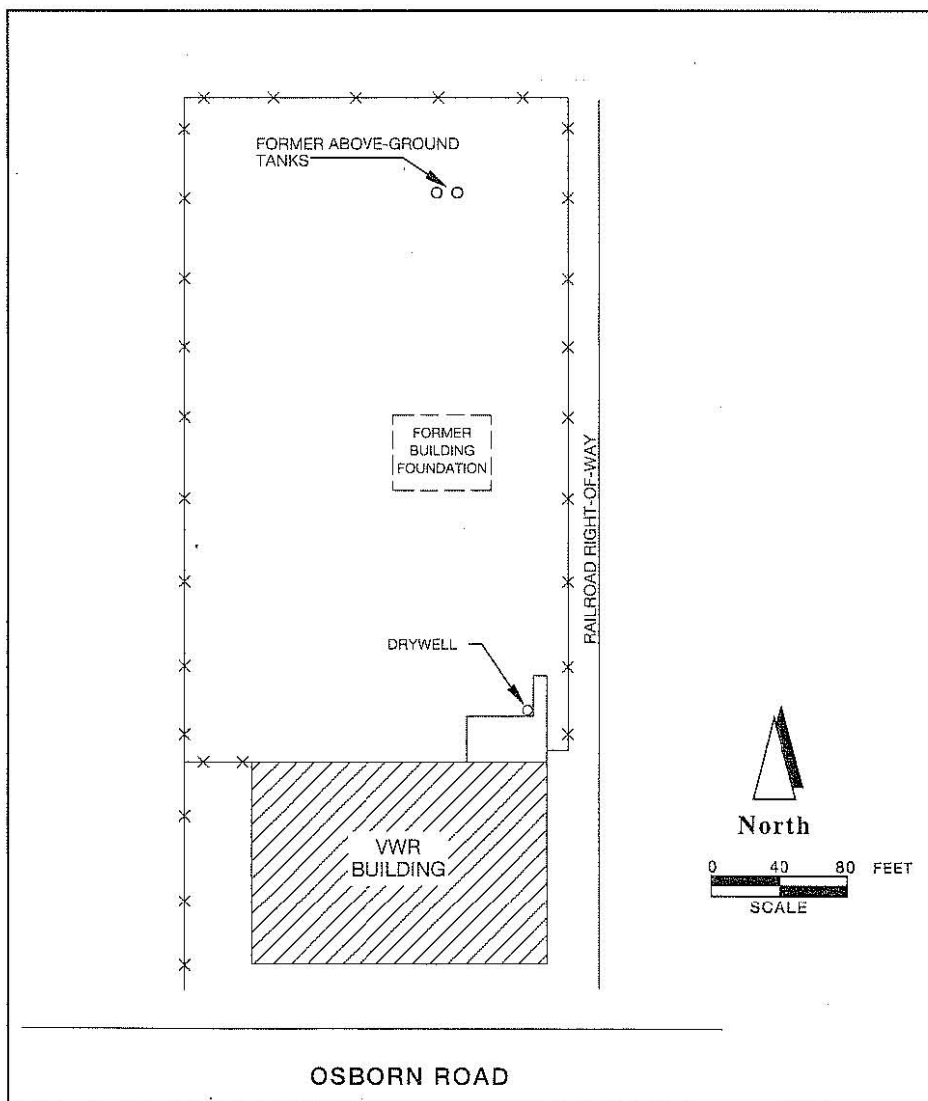


Figure 3: The diagram shows the former VW&R facility.

WHAT TYPE OF BUSINESS DID VW&R OPERATE?

VW&R was a chemical distribution firm.

VW&R stored a variety of chemicals at their 2930 West Osborn Road facility. These chemicals included: acids, bases, solvents, pesticides, and herbicides. Chemicals were stored in above-ground storage tanks and drums. Chemicals were packaged in smaller containers and sold to customers. VW&R also sold scientific and laboratory equipment, agricultural and industrial chemicals, upholstery supplies, and laundry/dry cleaning supplies. Figure 3 shows the layout of the former VW&R facility on West Osborn Road.

WHY IS AN INVESTIGATION BEING CONDUCTED AT THE FORMER VW&R FACILITY?

Chemicals were detected in soil and soil-gas samples collected at the former VW&R facility.

In 1993, ADEQ collected soil and soil-gas samples at the former VW&R facility. The soil-gas samples contained TCE; PCE; 1,1-DCE; TCA; methylene chloride; xylene; toluene; and benzenes. Soil samples contained TCE; PCE; and TCA. Metals and pesticides were also present in the soil samples. Contamination in the samples seemed to show that the pollution was present in the soil at the former VW&R facility. ADEQ concluded that additional work needed to be done at the site.

VW&R'S PARENT CORPORATION (UNIVAR) AGREED TO CONDUCT AN INVESTIGATION AT THE FORMER VW&R FACILITY.

VW&R's parent corporation (Univar) met with ADEQ and agreed to conduct an investigation at the former VW&R facility.

Univar agreed to collect soil and soil-gas samples near a former drywell and the drum storage area, where the above-ground

tanks had been located. Univar submitted two work plans. The first work plan described how Univar would conduct a soil-gas survey at the site. The second work plan described how soil samples would be collected and where the soil borings would be located. ADEQ reviewed the work plans and recommended changes. When the changes were made, ADEQ approved the plans.

WHEN DID UNIVAR'S INVESTIGATION AT THE FORMER VW&R FACILITY BEGIN?

Univar collected soil-gas samples in July 1994 and soil samples in December 1994.

Univar completed a soil-gas survey at the property in July 1994. They created a 50-foot grid across the entire facility and collected soil-gas samples at 50-foot intervals. All soil-gas samples were collected approximately five feet below the surface. TCE; PCE; and 1,1-DCE were present in almost all of the soil-gas samples. Univar met with ADEQ to discuss the soil-gas results and decide where to collect soil samples. It was decided that soil borings would be drilled and soil samples collected in areas where the highest concentrations of PCE; TCE; and 1,1-DCE had been found. Univar used a drill rig to drill seven boreholes and collect soil samples. Soil samples were collected every five feet in each boring.

WHAT DID THE SOIL SAMPLES CONTAIN?

Some of the soil samples collected at the former VW&R site contained TCE and PCE.

TCE and PCE were detected in soil samples collected from three of the seven soil borings. The highest concentrations were detected in a soil boring located near a former building foundation (see Figure 3). Univar met with ADEQ to discuss the soil sampling results and the next phase of the investigation at the former VW&R facility.

DID THE PCE AND TCE IN SOILS AT THE FORMER VW&R FACILITY CONTAMINATE GROUNDWATER?

We do not know because monitor wells have not been constructed at the site yet.

Univar did not construct monitor wells or collect groundwater samples during this phase of their investigation. It is not clear whether chemicals found in soils at the former VW&R site have contaminated groundwater beneath the site. Also, the direction of the groundwater flow beneath the former VW&R site is unknown. Monitor wells will have to be installed to answer these questions.

WHAT WILL HAPPEN NEXT AT THE FORMER VW&R FACILITY?

Monitor wells need to be installed at the former VW&R site.

After discussing investigation results with Univar and its environmental consultant, ADEQ asked Univar to install wells at the VW&R site. Univar is contemplating whether or not they will install the wells. If they decide not to install wells, ADEQ will construct the monitor wells. Groundwater samples collected from the monitor wells will be used to track the direction of the groundwater flow and to determine if chemicals are present in groundwater beneath the site. The monitor wells will also provide information to identify which chemicals, if any, are coming from the VW&R site.

GLOSSARY

Aquifer: Water-bearing soil or rock beneath the ground's surface that can store and supply groundwater to wells and springs.

CERCLA: Comprehensive Environmental Response, Compensation and Liability Act or "Superfund." CERCLA, also known as the federal "Superfund" law, was passed in 1980. CERCLA established a program to (1) identify sites where hazardous substances have been, or might be, released into the environment; (2) ensure that these sites are cleaned up by the responsible parties or the government; (3) evaluate damages to natural resources; and (4) create a claims procedure for parties who have cleaned up sites to recover their costs from a responsible party or parties.

Cleanup: Actions taken that deal with a release or threat of a release of a hazardous substance that could affect people or the environment. The term "cleanup" is sometimes used interchangeably with the terms remedial action, removal action, response action, remedy, remediation, or corrective action.

Cost Recovery: A legal process where responsible parties can be required to pay back the state for money it spends on any investigative and/or cleanup actions.

Drywell: A bored, drilled, or driven shaft or hole whose depth is greater than its width. A drywell is designed and constructed specifically for the disposal of storm water.

Facility: Under CERCLA, the term "facility" includes any place, site, or area where a hazardous substance has been deposited, stored, disposed of, placed, or otherwise came to be located.

Groundwater: Water found beneath the earth's surface that fills pores between materials such as sand, clay, or gravel. In aquifers, groundwater occurs in sufficient quantities that it can be used for drinking water, irrigation, and other purposes.

Hazardous Substance: Any element, compound, mixture, solution, or substance listed as a "hazardous substance" under CERCLA. Under CERCLA, tetrachloroethylene (PCE), trichloroethylene (TCE), and 1,1-dichloroethylene (1,1-DCE) are listed hazardous substances.

Maximum Contaminant Level (MCL): The maximum permissible level of a contaminant in water delivered to any user of a public water system. MCLs are enforceable standards.

Micrograms Per Liter ($\mu\text{g/L}$)/Parts Per Billion (ppb): Units commonly used to express low concentrations of contaminants. For example, 1 ounce of TCE in 1 billion ounces of water is 1 $\mu\text{g/L}$ or ppb. If one drop of TCE is mixed in a competition-size swimming pool, the water will contain about 1 $\mu\text{g/L}$ or ppb of TCE.

Monitoring Wells: Special wells drilled at specific locations on or off a site where groundwater can be sampled at selected depths and studied to determine such things as the direction in which groundwater flows and the types and amounts of contaminants present.

Plume: Describes the shape of the contaminant discharged in the groundwater, determined by the sampling of monitoring wells.

Responsible Party (RP): Those parties identified by ADEQ as liable under CERCLA for cleanup costs. RPs may include generators of hazardous waste and present or former owners/operators of certain facilities or real property where hazardous substances have been stored, treated, and/or disposed of. PRPs are Potentially Responsible Parties.

Remedial Investigation/Feasibility Study (RI/FS): A two-phase investigation conducted by RPs or ADEQ to investigate the scope of contamination (RI) and determine the remedial alternatives (FS) that may be implemented to clean up the site. The RI/FS requires extensive technical studies that may include soil and groundwater sampling and analyses both on the property and in adjoining areas that also may be contaminated. The objective of the RI/FS is to gather sufficient data to evaluate and select the most appropriate cleanup alternative for the site.

Soil-Gas: Chemical vapors in the small spaces between particles of soil. These vapors can be moved or driven out under pressure.

WQARF: The Water Quality Assurance Revolving Fund is a program established by the Arizona State Legislature to (1) perform statewide surface and groundwater quality monitoring; (2) perform health-effects studies, including epidemiological studies and risk assessments; (3) perform emergency remedial actions; and (4) conduct long-term remedial action programs. The WQARF program is funded with state monies, civil and criminal penalties, and funds recovered from RPs.

FOR MORE INFORMATION:

You can review documents related to the West Central Phoenix Project area:

Mon. - Fri.

8 a.m. - 5 p.m.

Arizona Department of

Environmental Quality

File Coordinator

3033 N. Central Ave.

Seventh Floor

Phoenix, Arizona 85012

(602) 207-4190

Or call the Arizona Department of Environmental Quality Superfund Hotline at 207-4360. You also may call Ana Vargas, project manager, at 207-4178.

MAILING LIST COUPON—WEST CENTRAL PHOENIX PROJECT

If you would like to receive future updates about the West Central Phoenix Project and have not already sent in a coupon, please return this coupon. You will be added to the project's mailing list.

Name: _____ Telephone: _____

Address: _____

Organization /Affiliation (if any): _____

Return to: Ana Vargas, ADEQ, 3033 North Central Avenue, Phoenix, AZ 85012

The Arizona Department of Environmental Quality shall preserve, protect and enhance the environment and public health and shall be a leader in the development of public policy to maintain and improve the quality of Arizona's air, land, and water resources.

Printed on recycled paper



Public Affairs
Arizona Department of Environmental Quality
3033 North Central Avenue
Phoenix, Arizona 85012

OFFICIAL NOTICE STATE OF ARIZONA

If you have a well in your backyard or somewhere else on your property, or know of a private well in the area of the groundwater pollution discussed in this fact sheet, and you suspect that it is not registered with the Department of Water Resources, please call 207-4360.

You may leave a message in English or Spanish. Someone will call you back as soon as possible.





Spring '96

ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY THE WEST CENTRAL PHOENIX STATE SUPERFUND PROJECT AREA

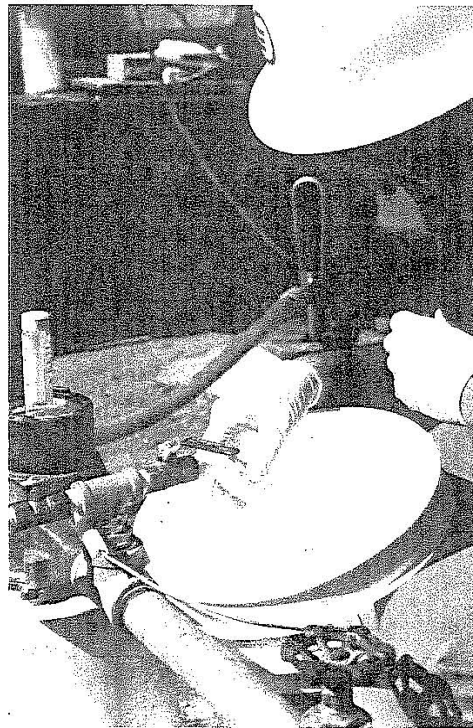
UPDATE ON THE WEST OSBORN COMPLEX

Since 1987, the Arizona Department of Environmental Quality (ADEQ) has been investigating soil and groundwater pollution from industrial solvents in West Central Phoenix. We have been working with property owners or businesses conducting investigations at the properties. This newsletter provides information about the investigation being conducted under ADEQ's supervision at the property known as the West Osborn Complex.

WHERE IS THE WEST OSBORN COMPLEX LOCATED?

The West Osborn Complex is located near 35th Avenue and Osborn Road.

The West Osborn Complex was originally one large property (about 15 acres) located near 35th Avenue and Osborn Road. Figure 1 shows the location of the West Osborn Complex in the West Central Phoenix area. It was built in the late 1950's. In the mid-1970s, the property was subdivided and sold as three separate properties (Figure 2).



Collecting a groundwater sample from monitoring well MW-5S at the West Osborn Complex facility (see Figure 2).

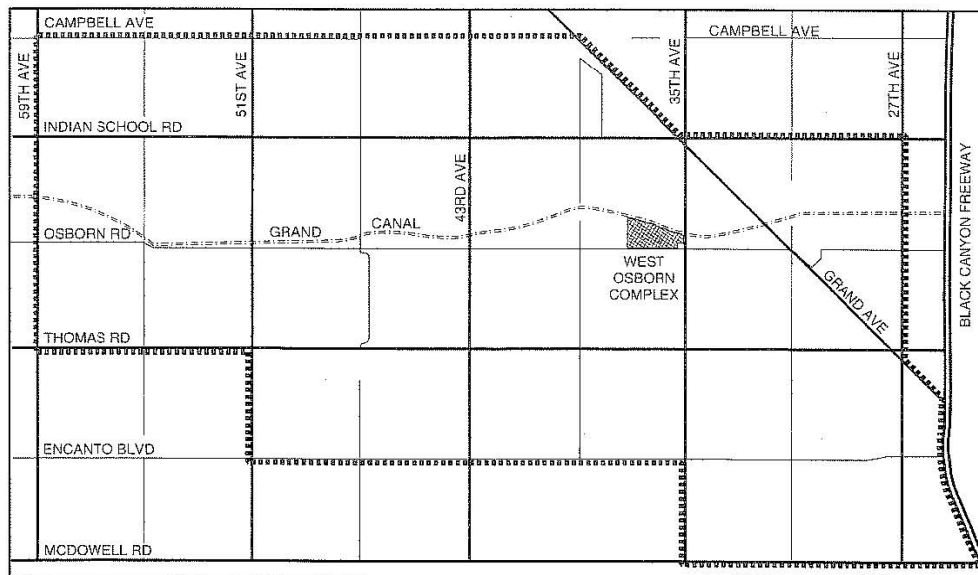


Figure 1: The map shows the boundaries of the West Central Phoenix area and the location of the West Osborn Complex facility.

WHAT TYPES OF BUSINESSES OPERATED AT THE WEST OSBORN COMPLEX?

Some of the former companies at the site manufactured capacitors, diodes, transistors, and semiconductor parts. These businesses used industrial solvents such as TCE.

Since the 1950's, many companies have operated at the site, including: United Industrial Corporation, Nuclear Corporation of America (Nucor Corporation), Corning Incorporated, May Industries, Western Dynex, and Lansdale Semiconductor. Today, businesses at the West Osborn Complex include a furniture manufacturer, machine shop, furniture liquidator, and several office complexes.

Some of the companies at the West Osborn Complex manufactured capacitors, diodes, transistors, semiconductor parts, and, in recent years, machined parts for the aerospace industry. Many of these businesses used industrial solvents such as trichloroethylene (TCE), alcohol, Stoddard solvent, and acetone in their production and cleaning processes.

During the 1950's through the 1970's, TCE was widely used as an industrial solvent.

WHY IS ADEQ INVESTIGATING THE WEST OSBORN COMPLEX?

Former employees and documents indicate that TCE and other chemicals were disposed into septic tanks and seepage pits. ADEQ believes that TCE has contaminated groundwater in the area.

ADEQ collected soil gas samples on all three properties in 1989. TCE, tetrachloroethylene (PCE), dichloroethylene (DCE), and trichloroethane (TCA) were found in many of the soil gas samples. ADEQ decided that more work needed to be done at this site and began negotiating with current and past owners to do more investigation at the West Osborn Complex.

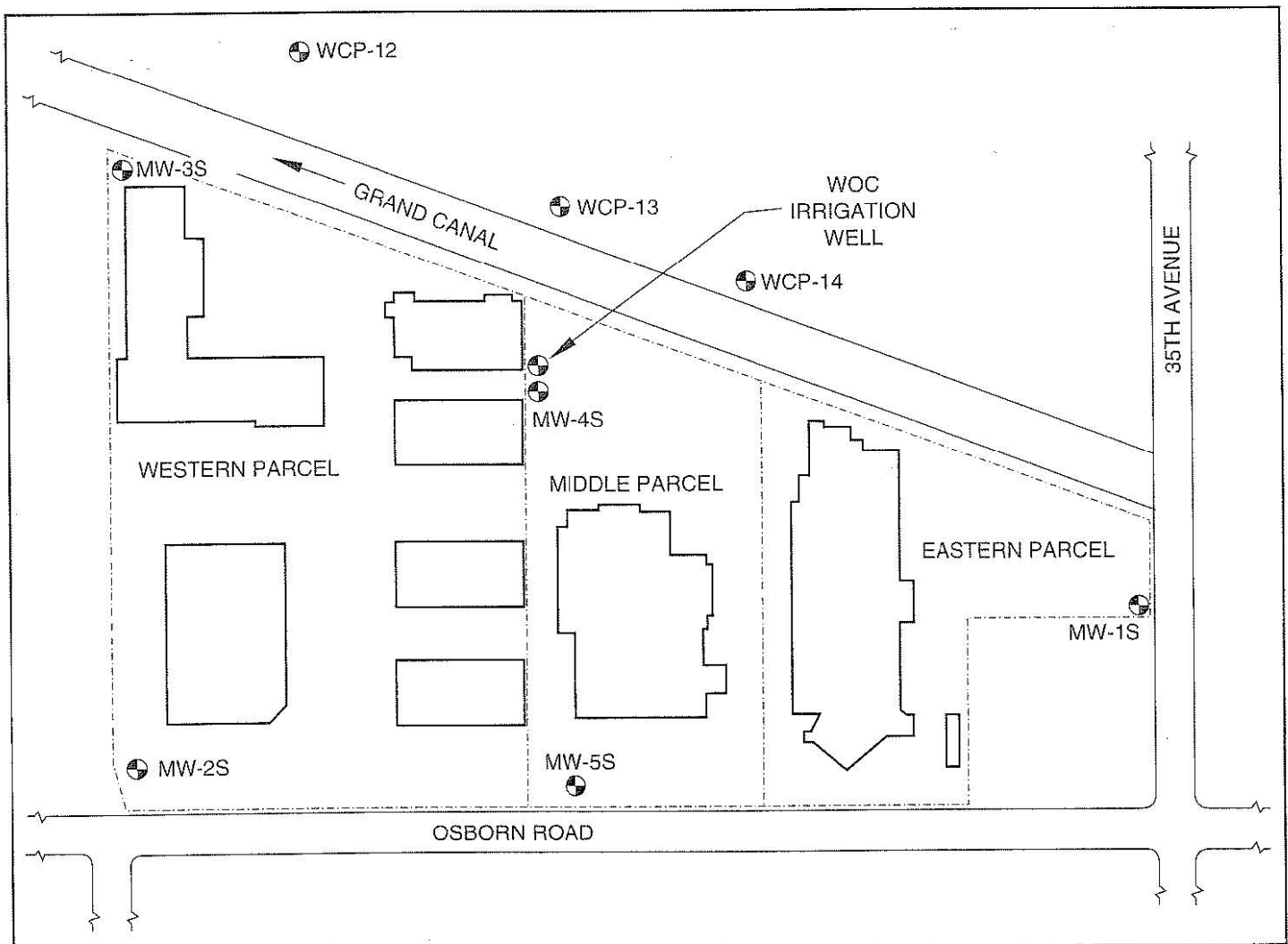
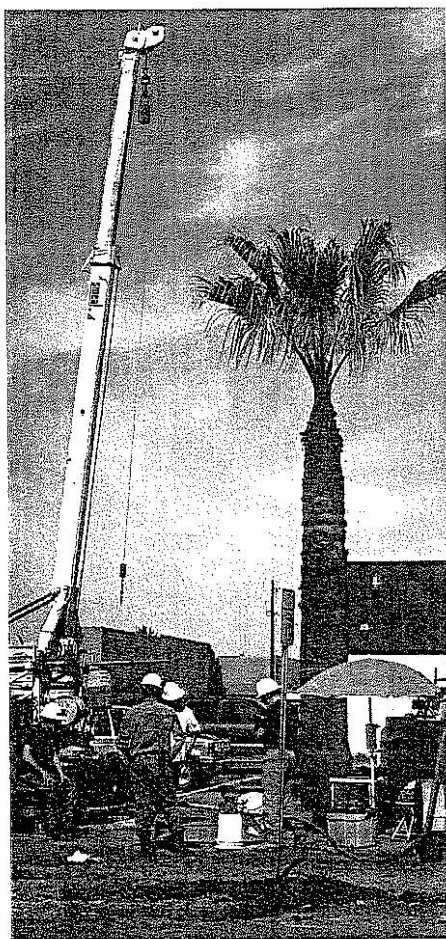


Figure 2: The diagram shows the West Osborn Complex, the three separate properties that comprise the site, and the location of monitor wells at or near the facility.

WHAT WORK HAS BEEN DONE SINCE 1990?

Current and past property owners conducted investigations at the West Osborn Complex in 1987, 1991, and 1992.

In 1987, Lansdale Semiconductor collected 10 soil samples from the middle parcel; TCE and TCA were found in two of the samples. In 1991, May Industries collected soil samples from 9 soil borings drilled on their property (the western parcel). Solvents were not detected in any of the samples obtained from the May Industries property. In 1992, Corning Incorporated conducted a soil and groundwater investigation on all three properties at the West Osborn Complex. Soil samples were collected from 35 soil borings. TCE and PCE were present in some of the soil samples. Also, five groundwater monitor wells were constructed at the West Osborn Complex. The groundwater samples contained high concentrations of TCE. PCE and DCE were also present in the groundwater samples.



Lowering pump into monitor well MW-5S to collect ground water sample.

In January 1996, ADEQ constructed two new monitor wells (WCP-13 and WCP-14) on the north side of the Grand Canal, across from the West Osborn Complex. In February 1996, ADEQ collected groundwater samples from the five West Osborn Complex wells and the two new wells. TCE was found in monitor wells MW-1S, MW-4S and MW-5S at the West Osborn Complex. PCE and DCE were also present in monitor wells MW-4S and MW-5S. No solvents were found in monitor wells WCP-13 and WCP-14 (Figure 2).

DO THE SOLVENTS DETECTED IN GROUNDWATER AT THE WEST OSBORN COMPLEX EXCEED HEALTH STANDARDS?

Yes, the TCE detected in samples collected from the West Osborn Complex wells in 1992 and 1996 exceeded the EPA MCLs.

Health standards have been set for drinking water by the U.S. Environmental Protection Agency (EPA) and the State of Arizona. These standards are called Maximum Contaminant Levels (MCLs). The MCL, or safe level in drinking water, is 5 parts per billion (ppb) for TCE. One ppb is roughly equal to a drop of water in an Olympic-sized swimming pool.

Solvents present in the three wells at the West Osborn Complex (wells MW-1S, MW-4S and MW-5S) exceeded EPA's health standards. TCE concentrations in the three wells ranged from 25 to 40 ppb in 1996. Solvents were not present in the two wells on the west side of the West Osborn Complex (wells MW-2S and MW-3S).

IS DRINKING WATER IN THE AREA SAFE?

Yes. Underground water pollution beneath the West Osborn Complex has nothing to do with current drinking water supplies in the area.

Residents and businesses are served by City of Phoenix drinking water. In the 1980s, Phoenix closed four drinking water wells because of contamination. Drinking water

is now supplied from surface water and groundwater from other areas, not from West Central Phoenix groundwater.

Groundwater contamination poses a long-term threat to future drinking water supplies and must be dealt with to keep the contamination from spreading, or cleaned up to make it usable for the future. For that reason, ADEQ is working to investigate, control, and cleanup contamination at the West Osborn Complex and in the West Central Phoenix area through the Water Quality Assurance Revolving Fund (WQARF), also known as the State Superfund.

WHAT IS BEING DONE TO CLEANUP THE WEST OSBORN COMPLEX?

ADEQ negotiated legal settlements with two former occupants at the West Osborn Complex. As part of the settlement agreements, two companies have agreed to help investigate and cleanup contamination at the site.

In 1991, a legal settlement or Consent Decree was reached between ADEQ and Nucor Corporation, one of the companies formerly operating at the West Osborn Complex. As part of the settlement, Nucor agreed to pay \$1.275 million for their potential share of the groundwater contamination in the West Central Phoenix area. The Court Order approving the settlement was signed in September 1993. However, the settlement was challenged by another party and the money was not given to ADEQ until January 1996. The settlement money will be used to help investigate and cleanup groundwater in the West Osborn Complex.

In February 1996, ADEQ reached a legal settlement with a second company, United Industrial Corporation (United), another firm formerly operating at the West Osborn Complex. United agreed to conduct a Remedial Investigation/Feasibility Study (RI/FS) and to pay for part of the groundwater cleanup at the West Osborn Complex. ADEQ has submitted the settlement to the U.S. District Court. As soon as the settlement agreement is approved by the court, United will begin work at the West Osborn Complex.

WHAT IS A REMEDIAL INVESTIGATION/FEASIBILITY STUDY (RI/FS) AND WHAT ARE THE STEPS IN THIS PROCESS?

A Remedial Investigation/Feasibility Study is a two part investigation that studies the type and extent of contamination at a site and recommends cleanup options. This RI/FS is expected to take approximately two years to perform and may cost two million dollars.

The steps in the RI/FS process are listed below:

- A remedial investigation (RI) studies the amount and type of pollution at a site.
- The feasibility study (FS) uses the information obtained from the remedial investigation to select the cleanup method that will work best for the site.
- Because it takes a lot of time to finish the RI and FS, a plan (Remedial Design Plan) may be prepared for an Interim Remedy. The Interim Remedy is a short-term cleanup system which starts cleaning up pollution at a site after the RI is finished. The purpose of the Interim Remedy is to prevent the pollution from spreading or getting worse while the FS is completed.

WHAT ARE THE OBJECTIVES OF THE RI?

The RI studies the type and amount of soil and groundwater contamination at the West Osborn Complex.

The West Osborn Complex RI will evaluate the type, source(s), and extent of soil contamination at the West Osborn Complex. The type and depth of groundwater contamination beneath the West Osborn Complex and in the surrounding area will also be studied.

WHAT ACTIVITIES ARE PLANNED FOR THE RI?

Records searches, excavations, drilling, and water and soil sampling will be conducted by United with ADEQ oversight during the RI.

Some of the specific activities to be done during the West Osborn Complex investigation include:

- Historical records searches
- Locating and excavating septic tanks, tile lines, and seepage pits.
- Collecting soil samples under the tanks, tile lines, seepage pits, and other areas of suspected contamination.
- Drilling soil borings and collecting soil samples.
- Installing groundwater monitoring wells.
- Collecting quarterly groundwater samples from monitor wells at the West Osborn Complex and in the surrounding area.
- Collecting water samples from the Grand Canal.

After the above activities are completed, United will prepare a plan describing the short-term cleanup of groundwater pollution at the West Osborn Complex. The purpose of the short-term groundwater cleanup (or interim remedy) is to stop the pollution from spreading or getting worse while the final cleanup solution is developed during the FS. ADEQ will seek community input during public meetings before the interim remedy is approved. The final groundwater cleanup method will be chosen after the Feasibility Study (FS) is finished.

WHAT IS THE PURPOSE OF THE FEASIBILITY STUDY (FS)?

The FS will identify the best method to cleanup contaminated soils and groundwater at the West Osborn Complex.

During the FS, United will prepare a detailed report which reviews many cleanup options and selects the best method for cleaning up soil and groundwater contamination at the West Osborn Complex. The cleanup methods must protect human health and the environment, comply with environmental regulations, be feasible, and be cost effective. The selected cleanup options will be sent to ADEQ for approval. A public comment period will be scheduled for the public to submit their opinions and/or concerns on the cleanup options for the soil and groundwater contamination. ADEQ will consider the public comments when choosing the best cleanup plan for the West Osborn Complex before the final cleanup is started.

FOR MORE INFORMATION:

You can review documents related to the West Central Phoenix Project area:

Mon. - Fri.
8 a.m. - 4 p.m. at the
Arizona Department of
Environmental Quality
3033 N. Central Ave.
Seventh Floor
Phoenix, Arizona 85012
Please call the File Coordinator
at (602) 207-4190 to set
an appointment.

Or call the Arizona Department of
Environmental Quality Superfund
Hotline at 207-4360. You may also
call Ana Vargas, project manager,
at 207-4178.

GLOSSARY

Aquifer: Water-bearing soil or rock beneath the ground's surface that can store and supply ground-water to wells and springs.

CERCLA: Comprehensive Environmental Response, Compensation and Liability Act or "Superfund." CERCLA, also known as the federal "Superfund" law, was passed in 1980. CERCLA established a program to (1) identify sites where hazardous substances have been, or might be, released into the environment; (2) ensure that these sites are cleaned up by the responsible parties or the government; (3) evaluate damages to natural resources; and (4) create a claims procedure for parties who have cleaned up sites to recover their costs from a responsible party or parties.

Consent Decree: A legal agreement between a company and federal or state court. Consent decrees usually go through a public comment period.

Cost Recovery: A legal process where responsible parties can be required to pay back the state for money it spends on any investigative and/or cleanup actions.

Drywell: A bored, drilled, or driven shaft or hole whose depth is greater than its width. A drywell is designed and constructed specifically for the disposal of storm water.

Facility: Under CERCLA, the term "facility" includes any place, site, or area where a hazardous substance has been deposited, stored, disposed of, placed, or otherwise came to be located.

Groundwater: Water found beneath the Earth's surface that fills pores between materials such as sand, clay, or gravel. In aquifers, groundwater occurs in sufficient quantities that it can be used for drinking water, irrigation, and other purposes.

Hazardous Substances: Any element, compound, mixture, solution, or substance listed as a "hazardous substance" under CERCLA. Under CERCLA, tetrachloroethylene (PCE), trichloroethylene (TCE), and 1,1-dichloroethylene (1,1-DCE) are listed hazardous substances.

Maximum Contaminant Level (MCL): The maximum permissible level of a contaminant in water delivered to any user of a public water system. MCLs are enforceable standards.

Micrograms Per Liter (µg/L)/Parts Per Billion (ppb): Units commonly used to express low concentrations of contaminants. For example, 1 ounce of TCE in 1 billion ounces of water is 1 µg/L or ppb. If one drop of TCE is mixed in a competition-size swimming pool, the water will contain about 1 µg/L or ppb of TCE.

Monitor Wells: Special wells drilled at specific locations on or off a site where groundwater can be sampled at selected depths and studied to determine such things as the direction in which ground-water flows and the types and amounts of contaminants present.

Plume: Describes the shape of the contaminant discharged in the groundwater, determined by the sampling of monitoring wells.

Responsible Party (RP): Those parties identified by ADEQ as liable under CERCLA for cleanup costs. RPs may include generators of hazardous waste and present or former owners/operators of certain facilities or real property where hazardous substances have been stored, treated, and/or disposed of. PRPs are Potentially Responsible Parties.

Remedial Investigation/Feasibility Study (RI/FS): A two-phase investigation conducted to investigate the scope of contamination (RI) and determine the remedial alternatives (FS) that may be implemented to clean up the site. The RI/FS requires extensive technical studies that may include soil and groundwater sampling and analyses both on the property and in adjoining areas that also may be contaminated. The objective of the RI/FS is to gather sufficient data to evaluate and select the most appropriate cleanup alternative for the site.

Risk Assessment: An evaluation performed to define the risk posed to human health and/or the environment by the presence or use of pollutants.

Seepage Pit: A structure designed to dispose of chemicals or liquids into the ground. Leach fields are horizontal structures that allow liquids to soak into the ground. Seepage pits are vertical structures that allow liquids to soak into the ground.

Soil-Gas: Chemical vapors in the small spaces between particles of soil. These vapors can be moved or driven out under pressure.

WQARF: The Water Quality Assurance Revolving Fund is a program established by the Arizona State Legislature to (1) perform statewide surface and groundwater quality monitoring; (2) perform health-effects studies, including epidemiological studies and risk assessments; (3) perform emergency remedial actions; and (4) conduct long-term remedial action programs. The WQARF program is funded with state monies, civil and criminal penalties, and funds recovered from RPs.

MAILING LIST COUPON—WEST CENTRAL PHOENIX PROJECT

If you would like to receive future updates about the West Central Phoenix Project and have not already sent in a coupon, please return this coupon. You will be added to the project's mailing list.

Name: _____ Telephone: _____

Address: _____

Organization/Affiliation (if any): _____

Return to: Ana Vargas, ADEQ, 3033 North Central Avenue, Phoenix, AZ 85012

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OFFICIAL NOTICE STATE OF ARIZONA

If you have a well in your backyard or somewhere else on your property, or know of a private well in the area of the groundwater pollution discussed in this fact sheet, and you suspect that it is not registered with the Department of Water Resources, please call 207-4360.

You may leave a message in English or Spanish. Someone will call you back as soon as possible.





Summer '97

ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY THE WEST CENTRAL PHOENIX STATE SUPERFUND PROJECT AREA

UPDATE ON THE WEST OSBORN COMPLEX PHASE I REMEDIAL INVESTIGATION

For the last 10 years, the Arizona Department of Environmental Quality (ADEQ) has been investigating soil and groundwater contamination from industrial solvents in the West Central Phoenix State Superfund Project Area. We have been working with property owners and businesses conducting investigations at the properties. This newsletter provides information about the investigation currently being conducted under ADEQ's supervision at the property known as the West Osborn Complex.

WHERE IS THE WEST OSBORN COMPLEX LOCATED?

The West Osborn Complex is located near 35th Avenue and Osborn Road.

The West Osborn Complex was originally one large property (about 15 acres) located near 35th Avenue and Osborn Road. Figure 1 shows the location of the West Osborn Complex in the West Central Phoenix State Superfund Project Area. It was built in the late 1950s. In the mid-1970s the property was subdivided and sold as three separate properties. Figure 2 shows the current layout of the West Osborn Complex.

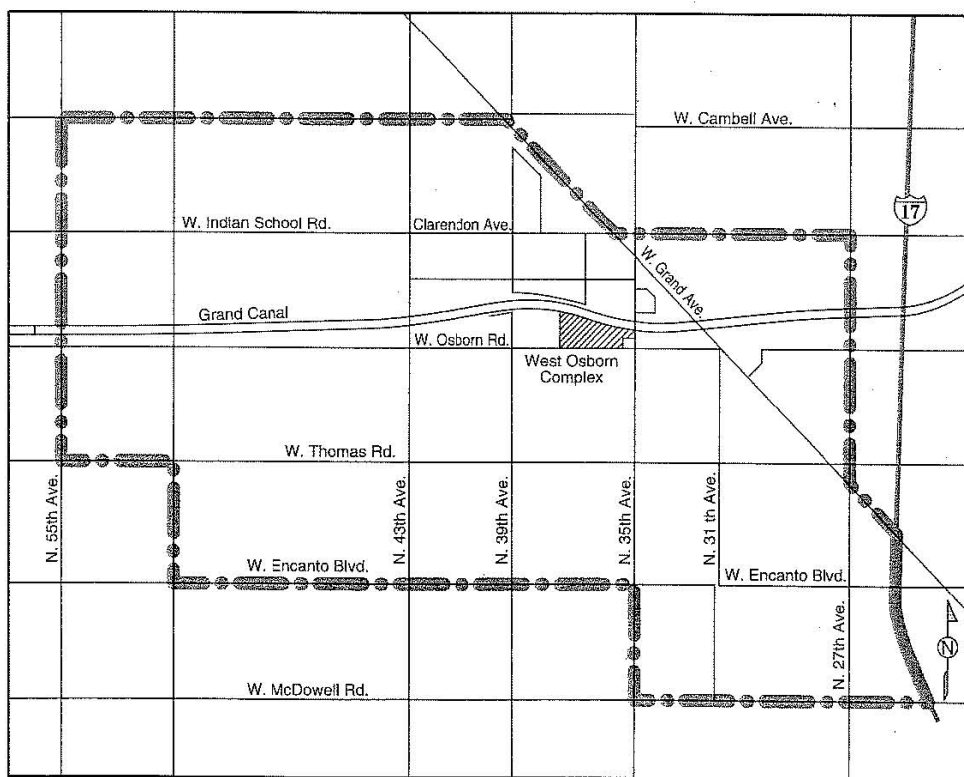


Figure 1: The map shows the boundaries of the West Central Phoenix area and the location of the West Osborn Complex facility.

WHAT TYPE OF BUSINESSES OPERATED AT THE WEST OSBORN COMPLEX?

Some of the former companies at the site manufactured electronic components such as capacitors, diodes, transistors, and semiconductor parts. These businesses used industrial solvents such as trichloroethylene or TCE.

Since the 1950s, many companies have been at the site including: United Industrial Corporation (United), from 1958 to 1961; Nuclear Corporation of America (Nucor), from 1961 to 1965; and Components Incorporated/Corning Incorporated (Corning), from 1965 to 1976. From the mid-1970s until the present time, businesses at the West Osborn Complex have included a semiconductor manufacturer (Lansdale Semiconductor), a furniture manufacturer, machine shop (May Industries Inc.), a disc-drive assembler for minicomputers (Western Dynex), a furniture liquidator, and several office complexes.

Some of the companies at the West Osborn Complex manufactured electronic components such as capacitors, diodes, transistors, and semiconductor parts. More recently, some companies machined parts for the aerospace industry. Many of these businesses used industrial solvents such as TCE, tetrachloroethylene (PCE), and trichloroethane (TCA) in their production and cleaning processes. These solvents are listed hazardous substances.

WHY IS ADEQ INVESTIGATING THE WEST OSBORN COMPLEX?

Former employees and historical documents indicated that TCE and other hazardous substances were disposed of into septic tanks and seepage pits at the West Osborn Complex. These chemicals have contaminated groundwater in the area.

TCE contamination was first detected in the West Central Phoenix State Superfund site in the 1980s in four City of Phoenix wells.

In the 1950s and 1960s, TCE was often used in manufacturing processes as a cleaning solvent. To identify possible sources of the TCE pollution, ADEQ collected information about all the businesses in the area. ADEQ made a list of more than 600 companies that may have used TCE. ADEQ then talked to current and former owners or employees of these businesses to obtain more information about their solvent usage.

Through discussions with former employees, ADEQ learned that large quantities of TCE and other wastes were disposed of in septic tanks and seepage pits at the West Osborn Complex from the late 1950s until the late 1960s. ADEQ also learned that TCE was disposed of onto the ground at the West Osborn Complex. ADEQ collected soil gas samples at the West Osborn Complex in 1989. TCE, PCE, 1,1-dichloroethylene (DCE), and TCA were found in many of the soil gas samples.

ADEQ decided that more work needed to be done at this site and began negotiating

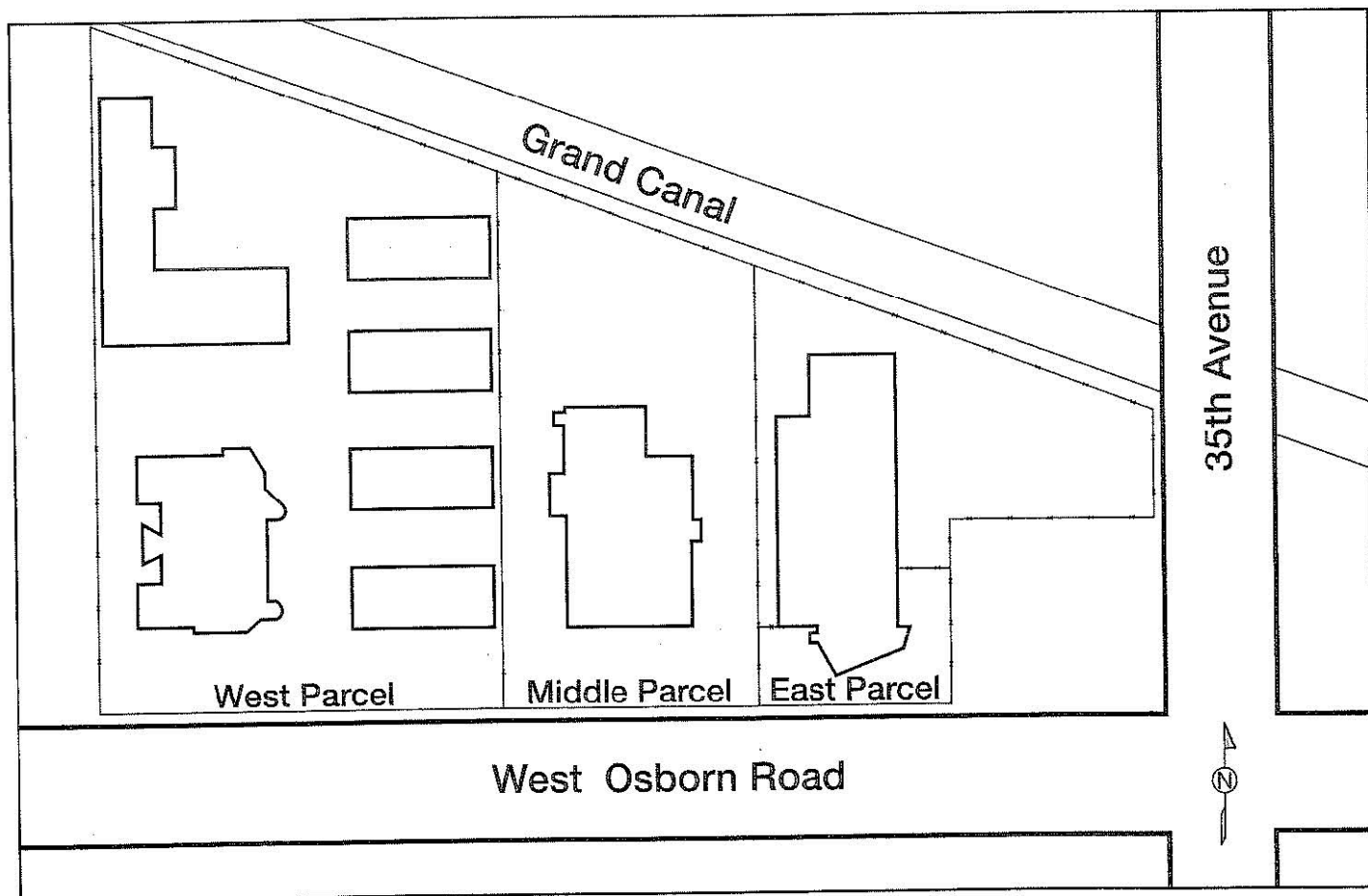


Figure 2: The diagram shows the West Osborn Complex facility and the three separate properties that comprise the site.

with current and past owners to do more investigating at the West Osborn Complex. One current occupant of the site (May Industries) and two past occupants (Lansdale and Corning) conducted investigations at the West Osborn Complex. Solvents were detected in soil samples collected on the western, middle, and eastern parcels of the West Osborn Complex. Also, five groundwater monitor wells were constructed at the West Osborn Complex. The groundwater samples contained high concentrations of TCE. PCE and DCE were also present in the groundwater samples.

WHO IS CONDUCTING THE CURRENT INVESTIGATION AT THE WEST OSBORN COMPLEX?

One of the former occupants of the West Osborn Complex, United Industrial Corporation, agreed to conduct an investigation and start cleaning up the site as part of a legal settlement.

ADEQ believed that several former businesses at the West Osborn Complex caused the soil and groundwater pollution at the site. ADEQ reached legal settlements with three of the companies: Nucor, United, and Corning. As part of their settlements, they paid money to help fund the investigation and cleanup at the West Osborn Complex. As part of its settlement, United also agreed to conduct a Remedial Investigation/Feasibility Study (RI/FS) and pay for part of the groundwater cleanup at the West Osborn Complex. The court approved the agreement in May 1996.

HAS THE WEST OSBORN COMPLEX RI/FS STARTED?

Yes. The first step in the RI/FS process was to write a "Work Plan." The work plan, developed by ADEQ and United, was finished in February 1996.

A work plan is a detailed document that describes the work to be performed during the RI/FS. The West Osborn Complex work

plan described activities to be conducted during the soil and groundwater investigations as well as other activities. The Phase I soil investigation activities included:

- Locating and excavating septic tanks, tile lines, and seepage pits.
- Collecting soil samples under the tanks, tile lines, seepage pits, and other areas of suspected contamination.
- Drilling soil borings and collecting soil samples.

Activities conducted during the Phase I groundwater investigation included:

- Installing groundwater monitoring wells.
- Collecting quarterly groundwater samples from monitor wells at the West Osborn Complex and in the surrounding area.
- Collecting water samples from the Grand Canal.

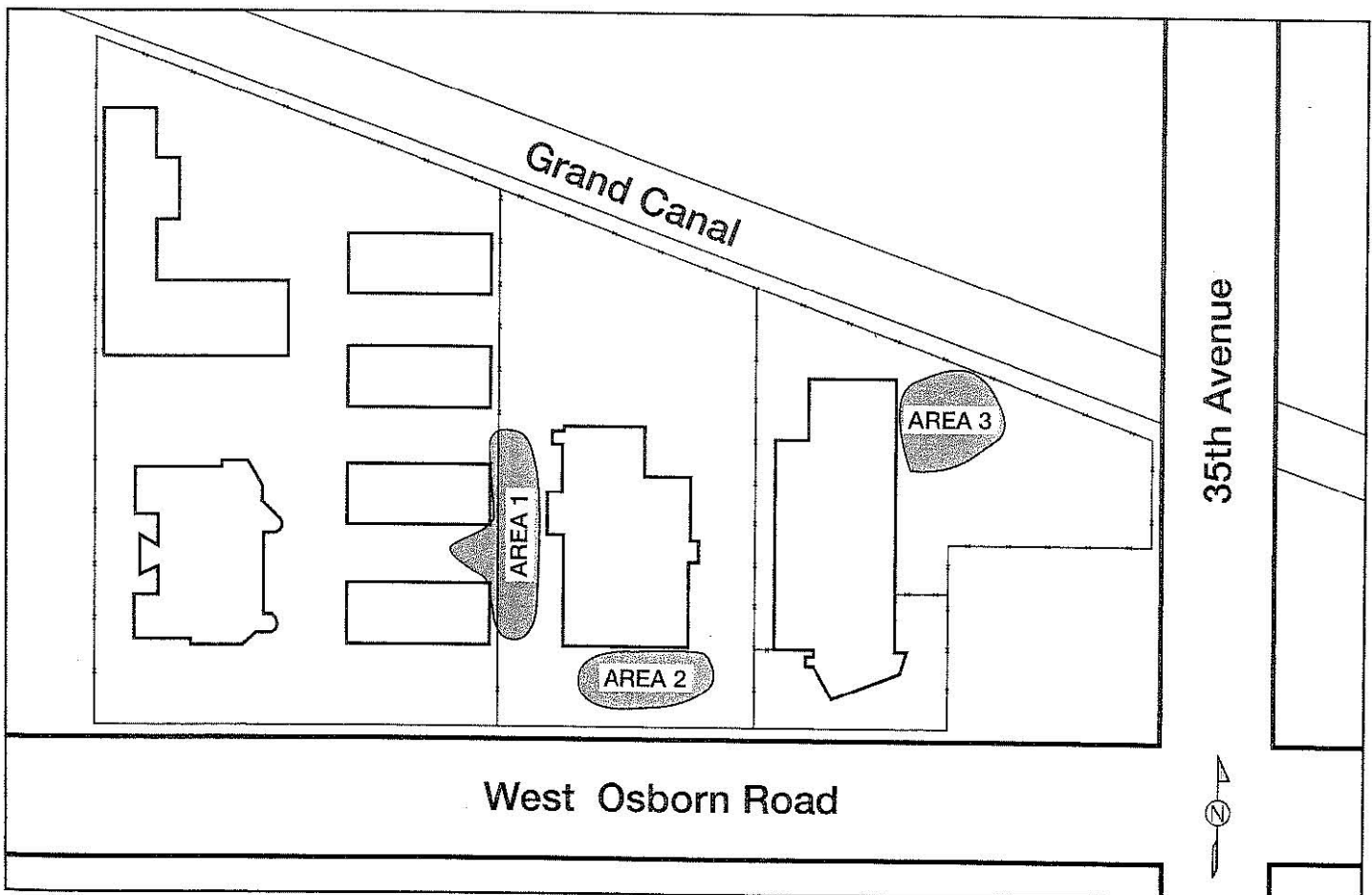


Figure 3: The diagram shows the three general areas where septic tanks and seepage pits were found at the West Osborn Complex during the Phase I soil investigation.

WHAT HAS BEEN DISCOVERED WITH THE SOIL INVESTIGATION?

In July and August 1996, United's environmental consultant dug trenches and found septic tanks and seepage pits at the West Osborn Complex.

Trenches were located along the buildings at the West Osborn Complex in areas where former employees said that septic tanks and seepage pits existed. Septic tanks and seepage pits were found in three general areas at the West Osborn Complex during the soil investigation (Figure 3). Two septic tanks were uncovered in Area 1. Several drain lines extended from the building on the middle parcel to two septic tanks in Area 1. A septic tank and seven seepage pits were excavated in Area 2. Two septic tanks and 10 seepage pits were found in Area 3. Several of the seepage-pits had inlet and outlet pipes near the top of the structure. Figure 4 shows a seepage pit similar to those found at the West Osborn Complex.

WHAT WAS DETECTED IN THE SOIL SAMPLES COLLECTED FROM THE SEEPAGE PITS AND SEPTIC TANKS?

The chemicals TCE, PCE, DCE, and TCA were found in soil samples at the West Osborn Complex.

Soil borings were drilled near each seepage pit to collect soil samples. Soil samples were also collected inside and beneath each septic tank. The highest concentrations of TCE were found in soil samples collected from the seepage pits and septic tank located in Area 2 (in front of the building on the middle parcel). TCE was also detected in a sample collected of the septic tank contents in Area 1 and a soil sample collected from a seepage pit in Area 3.

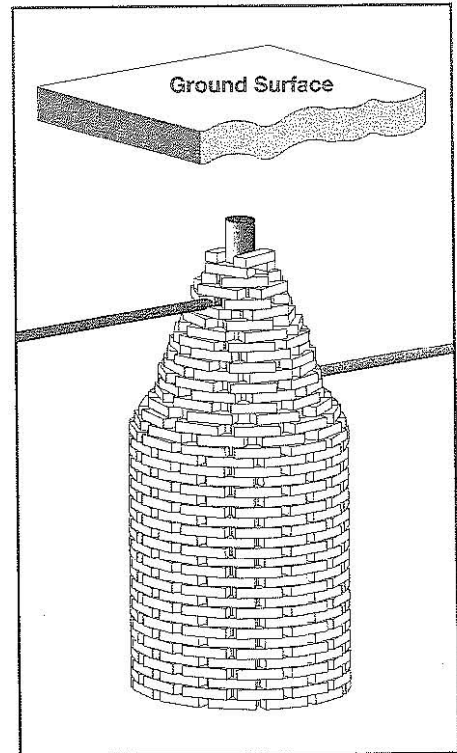


Figure 4: The diagram shows a seepage pit similar to those found during the West Osborn Complex Phase I soil investigation.

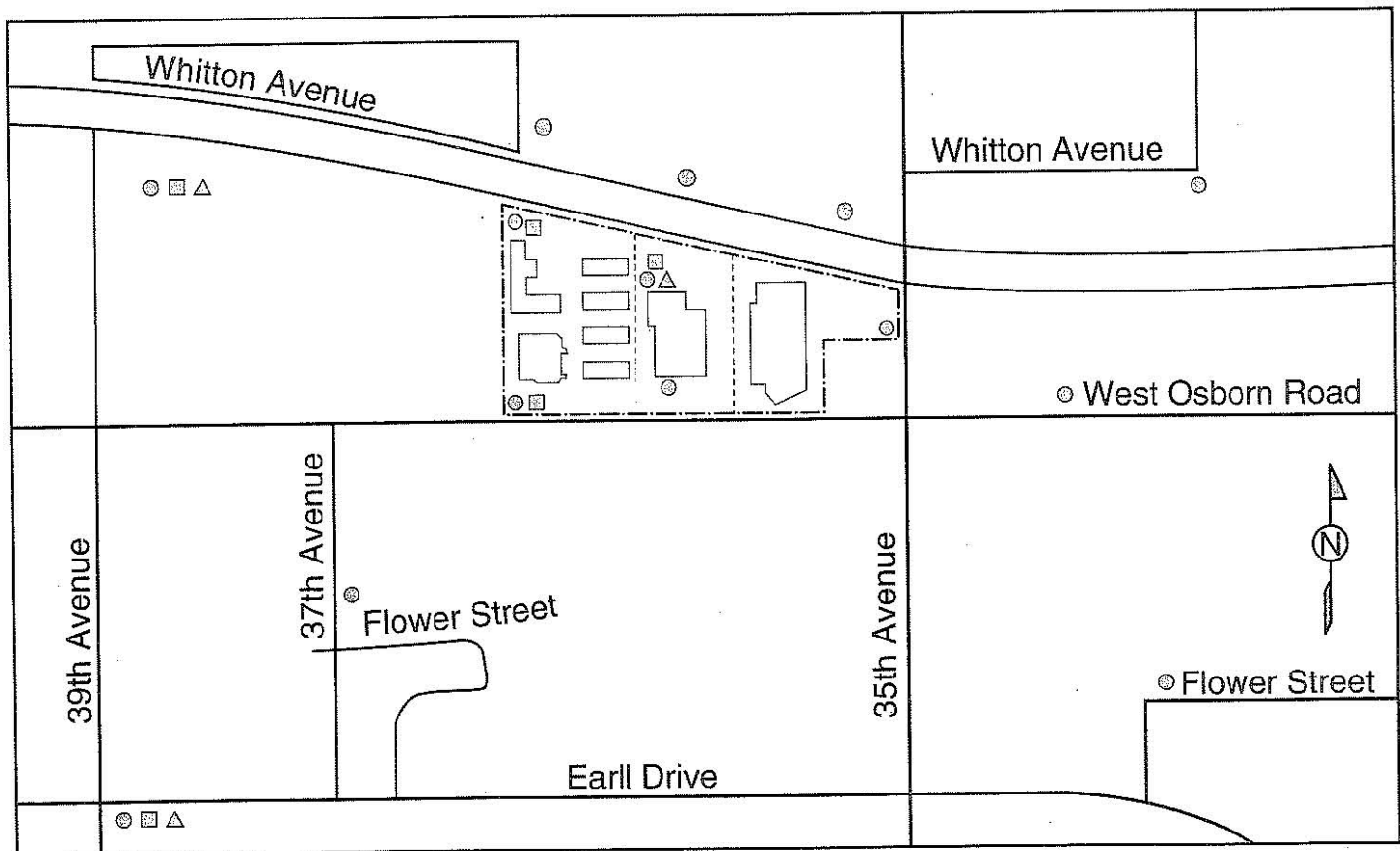
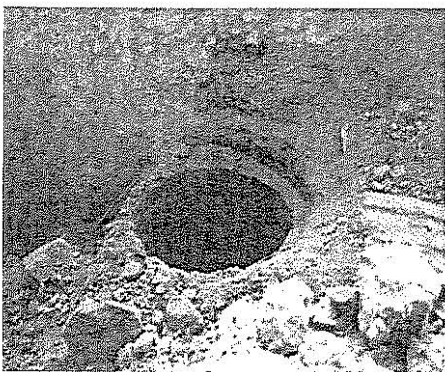


Figure 5: The diagram shows the locations of the 10 monitor wells installed by United Industrial Corporation during the Phase I groundwater investigation. Circles show shallow well locations. Intermediate-depth wells are shown as squares and deep wells are shown by triangles.



This photograph shows a seepage pit found during the trenching activities at the West Osborn Complex.



This is a close-up photograph of a seepage pit.

IS UNITED INVESTIGATING THE GROUNDWATER CONTAMINATION AT THE WEST OSBORN COMPLEX?

Yes. United constructed 10 monitor wells and collected groundwater samples during the West Osborn Complex Phase I groundwater investigation.

From July through October 1996, United's environmental consultant constructed a total of 10 new monitor wells as part of the West Osborn Complex RI/FS. Four monitor wells were constructed at the West Osborn Complex and six monitor wells were constructed at two off-site locations. Two wells were shallow depth (104 to 120 feet deep), five wells were intermediate depth (285 to 370 feet deep), and three wells were deep (780 to 810 feet deep). The wells were constructed to study the pollution in different depths of the groundwater aquifer beneath the West Osborn Complex. The well locations are shown in Figure 5. Circles show shallow well locations. Intermediate-depth wells are shown as squares and deep wells are shown by triangles.

WHY STUDY THE DIFFERENT DEPTHS OF THE GROUNDWATER AQUIFER?

United is studying the aquifer to develop a groundwater cleanup system for the contaminated water at the West Osborn Complex.

The groundwater aquifer beneath the West Central Phoenix State Superfund Project Area and the West Osborn Complex is divided into three units. Figure 6 shows the three units that are called the Upper Alluvial Unit, the Middle Alluvial Unit, and the Lower Alluvial Unit.

The three units are made up of different mixtures of sand, gravel, and clay. Groundwater and any contamination in the groundwater moves at different speeds through the three units. The Upper Alluvial Unit is very rocky, and groundwater moves very quickly through this upper layer. The Middle Alluvial Unit has a lot of clay, and groundwater moves very slowly through this unit. There are no wells drilled into the Lower Alluvial Unit, so the speed of groundwater movement is not known.

United drilled wells into the Upper and Middle Alluvial Units to find out how deep the contamination had spread and in what direction it was going. As shown in Figure 6, the shallow and intermediate-depth wells go into the Upper Alluvial Unit, while the deep wells go into the Middle Alluvial Unit. No wells were drilled into the Lower Alluvial Unit near the West Osborn Complex.

WAS CONTAMINATION DISCOVERED IN SHALLOW GROUNDWATER AT THE WEST OSBORN COMPLEX?

Yes. The highest levels of contamination were discovered in shallow wells near the center of the West Osborn Complex.

The highest contamination levels were discovered near the center of the West Osborn Complex in shallow wells MW-4S and MW-5S. TCE was present at concentrations of 390 parts per billion (ppb) in monitor wells MW-4S and 490 ppb in MW-5S. Lower concentrations of other solvents (PCE and DCE) were also present.

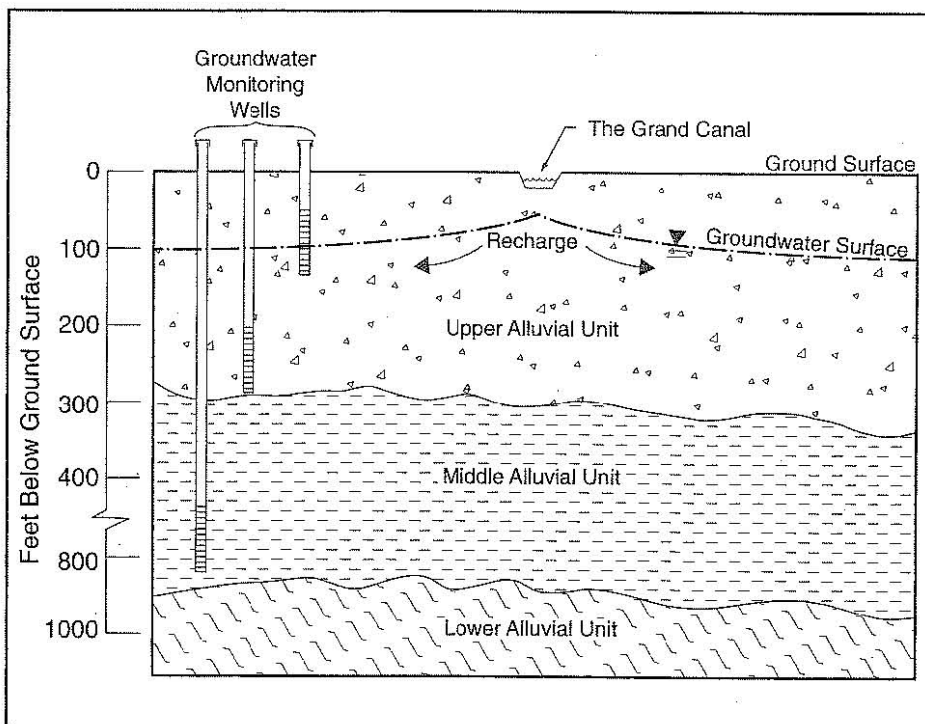


Figure 6: The diagram shows the three different interconnected aquifers presents below the West Osborn Complex facility. The three units are made up of sand, gravel, and clay. The surface of the groundwater is found within the Upper Alluvial Unit. As shown in the diagram, the shallow and intermediate-depth wells go into the Upper Alluvial Unit, while the deep wells go into the Middle Alluvial Unit.

WAS GROUNDWATER CONTAMINATION DISCOVERED IN THE INTERMEDIATE-DEPTH AND DEEP WELLS AT THE WEST OSBORN COMPLEX?

Contamination was also present in the intermediate depth wells. However, no contamination was detected in the deep wells.

TCE was detected in all five intermediate-depth wells. The concentrations of TCE ranged from 6.4 to 100 ppb. The Middle Alluvial Unit contains a lot of clay. The clay in the Middle Alluvial Unit may stop the contamination from going deeper. No solvents were detected in samples collected from the deep wells.

DID THE SOLVENTS DETECTED IN GROUNDWATER AT THE WEST OSBORN COMPLEX EXCEED HEALTH STANDARDS?

Yes. The TCE, PCE, and DCE detected in samples collected from the West Osborn Complex wells exceeded the drinking water standards.

Health standards have been set for drinking water by the United States Environmental Protection Agency (EPA) and the State of Arizona. These standards are called Maximum Contaminant Levels (MCLs). The MCL, or safe level in drinking water, is 5 ppb for TCE and PCE. The MCL for DCE is 7.0 ppb. One ppb is roughly equal to a drop of water in an Olympic-sized swimming pool.

Solvents found in the shallow and intermediate-depth wells at the West Osborn Complex exceeded their MCLs. Figure 7 shows the approximate extent of groundwater contamination at the West Osborn Complex. More wells are needed around the West Osborn Complex to find out how far the pollution has spread.

West Central Phoenix groundwater is currently not used as drinking water supply.

IS DRINKING WATER PROVIDED IN THE AREA SAFE?

Yes. Groundwater pollution beneath the West Osborn Complex has nothing to do with current drinking water supplies in the area.

Residents and businesses are served by City of Phoenix drinking water. In the 1980s, Phoenix closed four drinking water wells because of contamination. Drinking water is now supplied from surface water and groundwater from other areas, not from West Central Phoenix State Superfund Area groundwater.

Groundwater contamination needs to be dealt with to keep the contamination from spreading and to reduce exposure. For that reason, ADEQ is working to investigate, control, and cleanup contamination at the West Osborn Complex and in the West Central Phoenix Project Area through the Water Quality Assurance Revolving Fund (WQARF), also known as the State Superfund.

WHAT ARE THE NEXT STEPS IN THE WEST OSBORN COMPLEX INVESTIGATION?

United's consultant will do additional soil sampling, monitor well installation, and prepare a short-term groundwater cleanup plan.

Information about the soil and groundwater pollution at the West Osborn Complex is not complete. The Phase II investigation will collect additional soil samples and install additional monitor wells to fill in "data gaps" or "missing pieces" in the information collected during the first part of the West Osborn Complex RI/FS.

After the Phase II investigation is finished, United's consultant will design a short-term groundwater cleanup system for groundwater pollution at the West Osborn Complex. ADEQ will seek public comments before the short-term cleanup is approved. The purpose of the short-term cleanup is to reduce the amount of pollution in the groundwater.

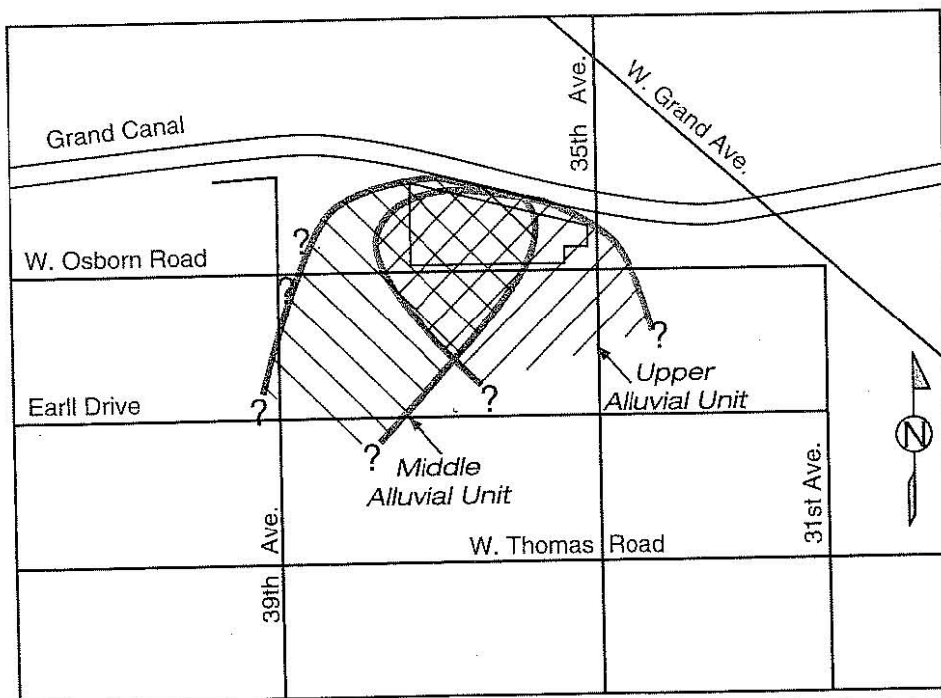


Figure 7: The diagram shows the approximate extent of groundwater contamination at the West Osborn Complex in the Upper Alluvial Unit and in the Middle Alluvial Unit. More wells are needed around the West Osborn Complex to find out how far the pollution has spread.

GLOSSARY

Aquifer: Water-bearing soil or rock beneath the ground's surface that can store and supply groundwater to wells and springs.

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Plume: Describes the shape of the contaminant discharged in the groundwater, determined by the sampling of monitor wells.

Responsible Party (RP): Those parties identified by ADEQ as liable under CERCLA for cleanup costs. RPs may include generators of hazardous waste and present or former owners/operators of certain facilities or real property where hazardous substances have been stored, treated, and/or disposed of. PRPs are Potentially Responsible Parties.

Remedial Investigation/Feasibility Study (RI/FS): A two-phase investigation conducted to investigate the scope of contamination (RI) and determine the remedial alternatives (FS) that may be implemented to clean up the site. The RI/FS requires extensive technical studies that may include soil and groundwater sampling and analyses both on the property and in adjoining areas that also may be contaminated. The objective of the RI/FS is to gather sufficient data to evaluate and select the most appropriate cleanup alternative for the site.

Risk Assessment: An evaluation performed to define the risk posed to human health and/or the environment by the presence or use of pollutants.

Seepage Pit: A structure designed to dispose of chemicals or liquids into the ground. Leach fields are horizontal structures that allow liquids to soak into the ground. Seepage pits are vertical structures that allow liquids to soak into the ground.

Soil-Gas: Chemical vapors in the small spaces between particles of soil. These vapors can be moved or driven out under pressure. These vapors can be sampled using special equipment. A metal probe is driven into the soil and a vacuum is created inside the probe. The vapors will move under vacuum from spaces between soil particles into the probe and then up into a sample container.

WQARF: The Water Quality Assurance Revolving Fund is a program established by the Arizona State Legislature to (1) perform statewide surface and groundwater quality monitoring; (2) perform health-effects studies, including epidemiological studies and risk assessments; (3) perform emergency remedial actions; and (4) conduct long-term remedial action programs. The WQARF program is funded with state moneys, civil and criminal penalties, and funds recovered from RPs.

FOR MORE INFORMATION:

You can review documents related to the West Central Phoenix Project area:

Mon. - Fri.
8 a.m. - 5 p.m.
Arizona Department of
Environmental Quality
File Coordinator
3033 N. Central Ave.
Seventh Floor
Phoenix, Arizona 85012
(602) 207-4189

Or call the Arizona Department of Environmental Quality Superfund Hotline at 207-4360. You also may call Ana Vargas, project manager, at 207-4178.

MAILING LIST COUPON—WEST CENTRAL PHOENIX PROJECT

If you would like to receive future updates about the West Central Phoenix Project and have not already sent in a coupon, please return this coupon. You will be added to the project's mailing list.

Name: _____ Telephone: _____

Address: _____

Organization/Affiliation (if any): _____

Return to: Ana Vargas, ADEQ, 3033 North Central Avenue, Phoenix, AZ 85012

The Arizona Department of Environmental Quality shall preserve, protect and enhance the environment and public health and shall be a leader in the development of public policy to maintain and improve the quality of Arizona's air, land, and water resources.

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Arizona Department of Environmental Quality
3033 North Central Avenue, Room 617
Phoenix, Arizona 85012

OFFICIAL NOTICE STATE OF ARIZONA

If you have a well in your backyard or somewhere else on your property, or know of a private well in the area of the groundwater pollution discussed in this fact sheet, and you suspect that it is not registered with the Department of Water Resources, please call 207-4360.

You may leave a message in English or Spanish. Someone will call you back as soon as possible.



Update on Your Environment



This information is from the Arizona Department of Environmental Quality (ADEQ) to the community near the West Central Phoenix Area.

Groundwater investigation within the West Central Phoenix Area

Since 1987, the Arizona Department of Environmental Quality (ADEQ) has been conducting an investigation in the West Central Phoenix Area (see the map below) to learn more about soil and groundwater contamination in the Area. In 1987, the West Central Phoenix Area was made a state Superfund Site under the *Arizona Water Quality Assurance Revolving Fund* (abbreviated WQARF). In the Summer of 1998, the West Central Phoenix (WCP) Area was split into five Sites. The investigation of the five Sites continues to be funded and managed by the State's Superfund Program, WQARF.

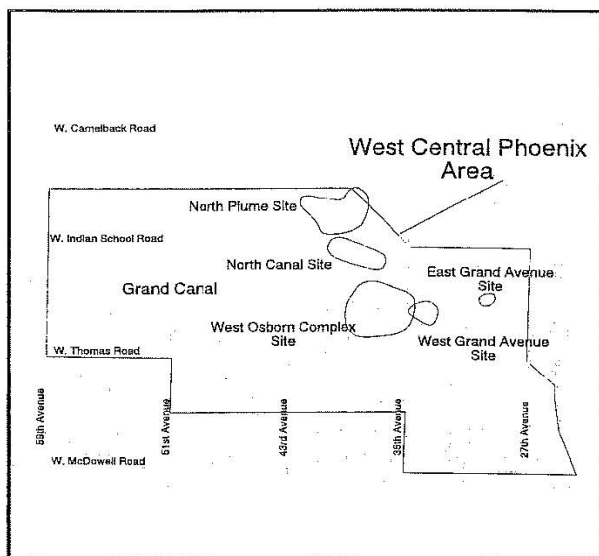
ADEQ is sending this notice to all residences and businesses within and near the West Central

Phoenix Area to provide up-to-date information about the contamination and the process for the investigation and *cleanup* of the contamination. If you would like to become involved in this process or would like additional information, please see the center section of this notice.

What is the history of the investigation at the West Central Phoenix Area?

Contamination in the area was first detected in the groundwater in July 1982. The City of Phoenix found the *chlorinated solvent* trichloroethylene (TCE) in four City water supply wells in the West Central Phoenix Area. The two wells with the highest concentrations of TCE were shut down in 1982. Monitoring continued on the other two wells to make sure that they met safe drinking water standards. The City of Phoenix closed the last two wells in 1989.

After the initial discovery, extensive groundwater sampling in the West Central Phoenix Area was conducted by the Arizona Department of Health Services (ADHS), the City of Phoenix and Salt River Project. The sampling verified the presence of chlorinated solvents in city wells and irrigation wells in the West Central Phoenix Area.



In 1984, ADHS conducted a survey of more than 400 area businesses that might have stored, handled or disposed of *hazardous substances*. Based on that investigation, it was determined that the contamination came from several sources. In 1987, West Central Phoenix Area was placed on the State Superfund (WQARF) former Priority List. In 1997, ADEQ established a Registry for WQARF Sites which replaced the Priority List. In 1998, the five Sites within the West Central Phoenix Area were added to the Registry.

* *Italicized terms are defined in the glossary located at the end of this notice.*

What are the future plans for the West Central Phoenix East Grand Avenue Site?

In 1998, the Phase II *Remedial Investigation (RI)* in the WCP East Grand Avenue Site was initiated and completed. Three groundwater *monitor wells* were installed around one of the facilities under investigation. Water elevation measurements and groundwater samples were collected from the three newly-installed monitor wells and three existing monitor wells. Groundwater sampling confirmed the presence of contaminants exceeding their respective water quality standards. At the end of the Phase II RI, the lateral and vertical extent of contamination remained undefined.

During the Spring of 1999, the Phase III RI in the WCP East Grand Avenue Site was initiated and is ongoing. The Phase III field investigative activities (which include the installation of a minimum of 9 monitor wells, soil sampling, geophysical testing, *aquifer* tests, quarterly groundwater sampling, monthly water level measurements) are expected to be near completion by the end of September 2000.

What are the future plans for the West Central Phoenix West Grand Avenue Site?

The *soil vapor extraction (SVE)* system has been shut down since May 1998. It is expected that the SVE system will be started up again to see if TCE is again present in the soil vapors beneath the Site. If TCE concentrations remain minimal, the soil remediation will be considered complete and the SVE system will be shut down.

What are the future plans for the West Central Phoenix North Plume Site?

In 1998, the Phase I RI in the WCP North Plume Site was initiated and completed at two facilities. Seven groundwater monitor wells were constructed on and around the perimeter of one of the facilities. Water elevation measurements and groundwater samples were collected from the seven wells and three additional nearby monitor wells.

Groundwater sampling confirmed the presence of contaminants exceeding their respective water quality standards. At the end of the Phase I RI, the lateral and vertical extent of contamination remained undefined.

Also, as part of the Phase I RI, soil samples and groundwater samples were collected at another facility within the WCP North Plume Site. Contamination was detected in soil samples from the facility. Groundwater sampling also confirmed the presence of contaminants exceeding their respective water quality standards.

During the Spring of 1999, the Phase II RI in the WCP North Plume Site was initiated and is ongoing. The Phase II field investigative activities (which include the installation of a minimum of 29 monitor wells, soil sampling, geophysical testing, *aquifer* tests, quarterly groundwater sampling, monthly water level measurements) are expected to be near completion by the end of September 2000.

What are the future plans for the West Central Phoenix North Canal Site?

In January 2000, ADEQ awarded a contract to conduct an RI and a *Feasibility Study (FS)* at the WCP North Canal Site. The RI field investigative activities (which will include the installation of a minimum of 8 monitor wells, soil sampling, geophysical testing, *aquifer* tests, quarterly groundwater sampling, monthly water level measurements) are expected to be completed by September 2001.

What are the future plans for the West Central Phoenix West Osborn Complex Site?

ADEQ believed that several former businesses at the West Osborn Complex caused the soil and groundwater contamination at the Site. ADEQ reached legal settlements with three companies. Two of the settlements included the payment of money to help fund the investigation and cleanup at the West Osborn Complex. The third company agreed to conduct an RI/FS and pay for part of the groundwater cleanup. The RI/FS at the West Osborn Complex Site started in 1996.

The hydrologic system beneath the WCP West Osborn Complex Site changed dramatically during 1998 due to the concrete lining of the SRP Grand Canal. Water levels beneath the Site dropped approximately 20 feet. As a result of these changes, the Design for the Interim Groundwater Pump and Treat system approved by ADEQ in 1997 became no longer feasible. Contamination in the groundwater beneath the West Osborn Complex facility became trapped in the soil beneath the facility after the drop in the water table. In 1998, the company conducting the RI/FS at the Site proposed SVE as an early response action. In late 1998, ADEQ requested the company to develop a Design Plan for an SVE system, which ADEQ approved. The SVE system has been operating since August 1999.

Also during 1998, ADEQ requested additional work to complete the evaluation of the lateral extent of groundwater contamination. As a result, an additional monitoring well was installed during 1998. Additional wells are expected to be installed in 2000 by either ADEQ or the settling party. Groundwater modeling and the FS are also expected to be finalized during 2000.

What are the contaminants in the West Central Phoenix Area?

Contaminants known to be present in groundwater at levels above regulatory limits at the West Central Phoenix Area include the chlorinated solvents tetrachloroethylene (PCE) and trichloroethylene (TCE).

How to learn more about the quality of your water

The groundwater in the West Central Phoenix Area is not used in the public drinking water system. If you are connected to a public drinking water system, your public water provider, the City of Phoenix, is required by law to provide water that meets all state and federal drinking water standards. The City of Phoenix conducts regular testing of your drinking water delivered to the community. For more information on your drinking water quality, please contact the City of Phoenix Water Services at (602) 262-6151. If you are using a private well in the area shown on the map and

would like information regarding well testing, please call Ana Vargas, ADEQ Project Manager, at (602) 207-4178 or 1-800-234-5677, ext. 4178

What are the risks associated with this contamination?

There are risks associated with exposure to PCE and TCE, principally through drinking the contaminated water. People who drink water containing PCE in excess of the *Maximum Contaminant Level (MCL)* over many years could have problems with their liver, kidney or nervous system, and may have an increased risk of getting cancer. People who drink water containing TCE in excess of the MCL over many years could experience problems with their liver and may have an increased risk of getting cancer.

It is important to remember that if your water is provided by a public water provider such as the City of Phoenix, they are required to provide you with safe and clean drinking water. The information above is provided to ensure that the public is informed of the potential risks of drinking water which is not regularly tested for safety. If you are using a private well in the area shown on the map and your well has not been tested, information regarding testing is available by calling Ana Vargas, ADEQ Project Manager, at (602) 207-4178 or 1-800-234-5677, ext. 4178.

How can the public be involved?

ADEQ will be assembling a West Central Phoenix Community Advisory Board (CAB) to advise ADEQ and the public of issues and concerns related to the remediation of the Area. The West Central Phoenix CAB will:

- provide comments to ADEQ on cleanup goals and methods, and other issues related to the Area;
- represent a diversified cross section of the community in and around the Area;
- participate in outreach to the community; and
- conduct Area visits, if desired.

If you would like to apply to become a member of the CAB, please fill out and return the enclosed application within two weeks. For more information, please call the ADEQ Community Involvement Coordinator, Donna Scott, at (602) 207-4190 or 1-800-234-5677, ext. 4190.

If you would like to be added to our mailing list for future site information, please fill out the enclosed form, fold and seal it, and put it in a mailbox. We have provided postage for the return of the mailing list and CAB application form.

As progress continues in the West Central Phoenix Area, we will keep the public informed of the latest findings through newsletters and public open houses. Interested parties can also review site information at Burton Barr Central Library, 1221 North Central Avenue, Phoenix or the Palo Verde Branch, 4402 North 51st Avenue, Phoenix.

Area information is also available at ADEQ's main facility at 3033 N. Central Avenue, Phoenix. To do so, please call the file clerk at (602) 207-4420 or 1-800-234-5677, ext. 4420, to arrange review of the Area file.

What is the Water Quality Assurance Revolving Fund (WQARF) and the Registry?

WQARF is a program established by the Arizona State Legislature to: 1) conduct statewide surface and groundwater monitoring; 2) study health effects of contamination; 3) perform emergency remedial actions; and 4) conduct long-term remedial action programs. The WQARF program is funded with state monies, taxes and fees, and funds recovered from parties responsible for contamination.

ADEQ has established a registry of sites in Arizona with groundwater and/or soil contamination. Sites appearing on the Registry qualify for funds available from the state's WQARF for investigation and cleanup of contamination. The five WCP Sites are included on the Registry. Sites on the Registry are scored based in part upon the type of contaminants present, the location of the contaminants, and the number of people that may be affected by the contamination. Scores are used to help determine relative risk at the site and do not necessarily mean that there is direct risk to humans or the environment. The score of the WCP East Grand Avenue Site is 26 out of a possible 120. The score of the WCP West Grand Avenue Site is 17 out of a possible 120. The score of the WCP North Plume Site is 50 out of a possible 120. The score of the WCP North Canal Site is 22 out of a possible 120. The score of the WCP West Osborn Complex Site is 47 out of a possible 120.

ADEQ Contacts:

If you are interested in obtaining more information about the West Central Phoenix Area, please complete the attached mailing card, and/or contact:

Donna Scott, ADEQ Community Involvement Coordinator, (602) 207-4190 or 1-800-234-5677, ext. 4190

Ana Vargas, ADEQ Project Manager, (602) 207-4178 or 1-800-234-5677, ext. 4178

Maria Fant, ADEQ Community Involvement Supervisor, (602) 207-4194 or 1-800-234-5677, ext. 4194

Hearing impaired persons may call our TDD line at (602) 207-4829.

ADEQ offices are located at 3033 North Central Avenue, Phoenix, AZ 85012. Our fax number is (602) 207-4236. Our main switchboard number is (602) 207-2202 or 1-800-234-5677.

Please visit ADEQ's Website at <http://www.adeq.state.az.us>. Information on this and other sites may be found within the Environmental Programs, Waste Programs Division, Superfund Programs Section.

Glossary

aquifer – Water-bearing soil or rock beneath the ground's surface that can store and supply groundwater to wells and springs.

chlorinated solvent – An organic solvent containing chlorine atoms that is used in aerosol spray containers, in highway paint, and dry cleaning fluids.

cleanup – Actions taken that deal with a release or threat of a release of a hazardous substance that could affect people or the environment. The term "cleanup" is sometimes used interchangeably with the terms remedial action, removal action, response action, remedy, remediation, or corrective action.

contamination – Any hazardous substance released into the environment.

Feasibility Study (FS) – A description and analysis of the potential cleanup options for a contaminated site using information from the Remedial Investigation. The Feasibility Study usually recommends the selection of a cost-effective and practical cleanup option.

groundwater – Water found beneath the earth's surface that fills pores between materials such as sand, clay, or gravel. In aquifers, groundwater occurs in sufficient quantities that it can be used for drinking water, irrigation, and other purposes.

hazardous substance – Any material that, because of its quantity, concentration, or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment.

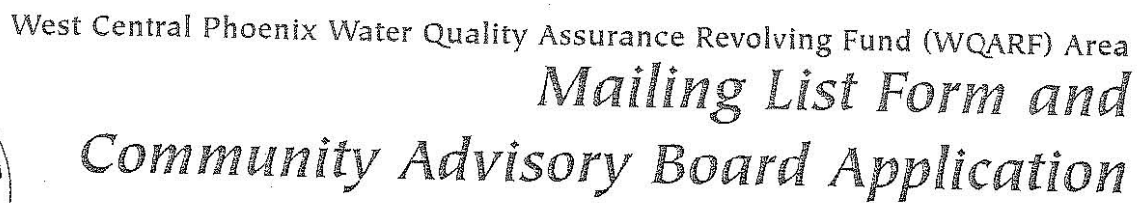
Maximum Contaminant Level (MCL) – Standard set to ensure that water is safe for drinking and other uses. These standards are set by federal and state agencies to protect human health.

monitor wells – Wells installed for the purpose of collecting samples such as groundwater and soil gas. Analytical results from the samples are used to characterize the extent of the contamination.

Remedial Investigation (RI) – An in-depth study designed to gather the data necessary to determine the nature and extent of contamination at a site.

soil vapor extraction (SVE) – Soil vapor extraction is a commonly used technique for cleaning up contaminated soils. Soil vapor extraction draws air through contaminated soils and the contaminants are transferred to the air. The contaminated air is then treated or discharged, depending on the amount and type of contamination present.

Water Quality Assurance Revolving Fund (WQARF) – Also known as "State Superfund." WQARF is a program administered by ADEQ to: (1) conduct statewide surface and groundwater monitoring; (2) study health effects of contamination; (3) perform emergency remedial actions; and (4) conduct site investigation and long-term remediations.



Questions? Contact Donna Scott at (602) 207-4190. You will be notified by mail regarding the status of your application. Thank you for your interest!

últimas

Noticias Sobre Su Medio Ambiente



Información del Departamento de Calidad Ambiental de Arizona a la comunidad cercana al Area Central al Oeste de Phoenix.

Investigación del agua subterránea dentro del Area Central al Oeste de Phoenix

Desde 1987, el Departamento de Calidad Ambiental de Arizona (ADEQ, siglas en inglés) ha estado conduciendo una investigación de la contaminación del subsuelo y el *agua subterránea* en el Area Central al Oeste de Phoenix (vea el mapa abajo). En 1987, el Area Central al Oeste de Phoenix se convirtió en un Sitio del Superfondo Estatal, también conocido como el *Fondo Rotativo para Asegurar la Calidad del Agua de Arizona* (WQARF, siglas en inglés). En el verano de 1998, el Area Central al Oeste de Phoenix fue dividida en cinco Sitios. La investigación de los cinco Sitios continúa siendo financiada y administrada por el Programa del Superfondo Estatal, WQARF.

ADEQ está enviando este aviso a todos los domi-

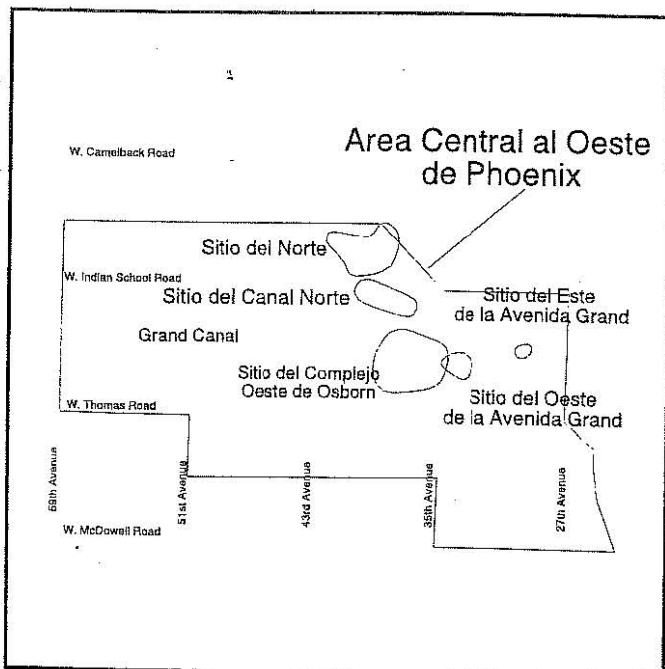
cilios que se encuentran dentro y cerca del Area Central al Oeste de Phoenix para proveer las últimas noticias sobre la contaminación y el proceso para la investigación y *limpieza* de la contaminación. Si usted desea participar en este proceso o le interesa obtener más información, por favor lea la sección central de este aviso.

¿Cuál es la historia de la investigación en el Area Central al Oeste de Phoenix?

La contaminación del agua subterránea en el área fue detectada por primera vez en julio de 1982. La Ciudad de Phoenix encontró el *disolvente clorinado* tricloroetileno (TCE, siglas en inglés) en el Area Central al Oeste de Phoenix en cuatro de sus pozos de agua potable. Los dos pozos con las mayores concentraciones de TCE fueron cerrados en 1982. Los otros dos siguieron bajo observación para asegurar que cumplieran con las normas estatales del agua potable. En 1989, la Ciudad de Phoenix ordenó el cierre de los mismos.

Después del hallazgo inicial, el Departamento de Servicios de Salud de Arizona (ADHS, siglas en inglés), la Ciudad de Phoenix y el Proyecto del Río Salado condujeron una extensa colección de muestras de agua. En dichas muestras, se encontró la presencia de disolventes clorinados en los pozos de agua potable y de irrigación en el Area Central al Oeste de Phoenix.

En 1984, ADHS llevó a cabo una encuesta de más de 400 negocios en el área que pudieran haber almacenado, manejado o dispuesto de *substancias peligrosas*. Basado en esa investigación, se determinó que la contaminación provenía de varias fuentes. En 1987, el Area Central al Oeste de Phoenix fue puesta en lo que anteriormente fue conocida como la Lista de Prioridades del Superfondo Estatal (WQARF). En 1997, ADEQ

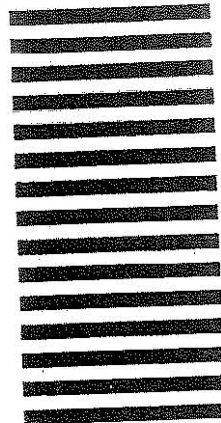


*Los términos en *italicas* son definidos en el glosario al final de este aviso.

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ATTN: DONNA SCOTT
ROOM 755
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3033 N CENTRAL AVE
PHOENIX AZ 85012-9918



estableció un Registro para Sitios de WQARF que reemplazó la Lista de Prioridades. En 1998, los cinco Sitios dentro del Area Central al Oeste de Phoenix fueron añadidos al Registro.

¿Cuáles son los planes futuros para el Sitio del Este de la Avenida Grand en el Area Central al Oeste de Phoenix?

En 1998, ADEQ inició y completó la Fase II de la *Investigación Remedial* (RI, siglas en inglés) en el Sitio del Este de la Avenida Grand. ADEQ instaló tres pozos de observación alrededor de una de las instalaciones bajo investigación. ADEQ tomó muestras del agua subterránea y midió los niveles del agua de los tres pozos de observación recientemente instalados y de otros tres pozos de observación que existían en el área. Las muestras del agua subterránea confirmaron que cada uno de los contaminantes detectados excedían los estándares del agua potable. Al final de la Fase II del RI, la extensión horizontal y vertical de la contaminación permaneció indefinida.

Durante la primavera de 1999, la Fase III del RI en el Sitio del Este de la Avenida Grand se inició y hasta ahora continúa. Se espera que las actividades investigativas de la Fase III (las cuales incluyen la instalación de un mínimo de 9 pozos de observación, la toma de muestras del subsuelo, análisis geofísicos, análisis del acuífero, toma de muestras trimestral del agua subterránea y medidas mensuales de los niveles del agua subterránea) estén casi terminadas para el final de septiembre del 2000.

¿Cuáles son los planes futuros para el Sitio del Oeste de la Avenida Grand en el Area Central al Oeste de Phoenix?

El sistema de extracción de vapor del subsuelo (SVE, siglas en inglés) cesó de operar desde mayo de 1998. Se espera que el sistema SVE vuelva a operar para ver si el TCE sigue presente en los vapores del subsuelo debajo del Sitio. Si las concentraciones de TCE permanecen mínimas, la limpieza del subsuelo se considerará

terminada y la operación del sistema de SVE cesará permanentemente.

¿Cuáles son los planes futuros para el Sitio del Norte en el Area Central al Oeste de Phoenix?

En 1998, ADEQ inició y completó la Fase I del RI en dos instalaciones en el Sitio del Norte. ADEQ instaló siete pozos de observación en y alrededor del perímetro de una de las instalaciones. ADEQ tomó muestras del agua subterránea y midió los niveles del agua de los siete pozos recientemente instalados y de otros tres pozos de observación cercanos. Las muestras del agua subterránea confirmaron que cada uno de los contaminantes detectados excedían los estándares del agua potable. Al final de Fase I del RI, la extensión horizontal y vertical de la contaminación permaneció indefinida.

Como parte de la Fase I del RI, también se tomaron muestras del subsuelo y del agua subterránea en otra instalación dentro del Sitio del Norte. Las muestras del subsuelo obtenidas de la instalación detectaron contaminantes. Las muestras del agua subterránea también confirmaron que cada uno de los contaminantes detectados excedían los estándares del agua potable.

Durante la primavera de 1999, la Fase II del RI en el Sitio del Norte se inició y hasta ahora continúa. Se espera que las actividades investigativas de la Fase II (las cuales incluyen la instalación de un mínimo de 29 pozos de observación, la toma de muestras del subsuelo, análisis geofísicos, análisis del acuífero, toma de muestras trimestral del agua subterránea, y medidas mensuales de los niveles del agua subterránea) estén casi terminadas para el final de septiembre del 2000.

¿Cuáles son los planes futuros para el Sitio del Canal Norte en el Area Central al Oeste de Phoenix?

En enero del 2000, ADEQ otorgó un contrato para conducir el RI y el *Estudio de Factibilidad* (FS,

siglas en inglés) en el Sitio del Canal Norte. Se espera que las actividades investigativas del RI (las cuales incluyen la instalación de un mínimo de 8 pozos de observación, la toma de muestras del subsuelo, análisis geofísicos, análisis del acuífero, toma de muestras trimestral del agua subterránea y medidas mensuales de los niveles del agua subterránea) terminen en septiembre del 2001.

¿Cuáles son los planes futuros para el Sitio del Complejo Oeste de Osborn en el Area Central al Oeste de Phoenix?

Ha sido la creencia de ADEQ que la contaminación del subsuelo y el agua subterránea en el Sitio del Complejo Oeste de Osborn fué causada por varios negocios que operaron antiguamente en el Sitio. ADEQ llegó a un acuerdo legal con tres compañías. Dos de las compañías acordaron aportar dinero para ayudar en la investigación y limpieza del Sitio del Complejo Oeste de Osborn. La tercera compañía acordó conducir el RI/FS y pagar parte de los costos para la limpieza del agua subterránea. El RI/FS del Sitio del Complejo Oeste de Osborn comenzó en 1996.

El sistema hidrológico debajo del Sitio del Complejo Oeste de Osborn cambió dramáticamente durante 1998 debido a la cobertura de concreto del Canal Grand del Proyecto del Río Salado. Los niveles del agua subterránea debajo del Sitio bajaron aproximadamente 20 pies. Como resultado de estos cambios, el Diseño para el Sistema Interino de Bombeo y Tratamiento del Agua Subterránea aprobado por ADEQ en 1997 ya no era posible. Después que los niveles de agua subterránea bajaron, la contaminación en el agua subterránea debajo del Complejo Oeste de Osborn fue atrapada en la tierra debajo de la instalación. En 1998, la compañía encargada de conducir el RI/FS en el Sitio propuso SVE como una acción de respuesta rápida. A finales de 1998, ADEQ le pidió a la compañía que desarrollara un Plan de Diseño para el sistema de SVE, el cual ADEQ aprobó en 1999. El sistema SVE ha estado operando desde agosto de 1999.

También en 1998, ADEQ solicitó trabajo adicional para completar la evaluación de la extensión horizontal de la contaminación en el agua

subterránea. Como resultado, la compañía instaló un pozo de observación adicional durante 1998. Se espera que pozos adicionales sean instalados en el año 2000, ya sea por ADEQ o por la compañía encargada de conducir el RI/FS. También se espera que los modelos computarizados del agua subterránea y el FS sean finalizados durante el año 2000.

¿Cuáles son los contaminantes que se encuentran en el Area Central al Oeste de Phoenix?

Se sabe que en Area Central al Oeste de Phoenix, los disolventes clorinados tetra-cloroetileno (PCE, siglas en inglés) y TCE son contaminantes que están presentes en el agua subterránea sobre los límites reglamentarios.

Cómo aprender más sobre la calidad del agua

El agua subterránea en el Area Central al Oeste de Phoenix no es usada en el sistema público de agua potable. Si usted está conectado al sistema público de agua potable, su proveedor público de agua, la Ciudad de Phoenix, está obligado por ley a proporcionarle agua que satisfaga todos los estándares estatales y federales de agua potable. La Ciudad de Phoenix conduce regularmente pruebas de agua potable para asegurarse de que cumple con los estándares establecidos y de que el agua potable que provee a la comunidad es segura. Para más información sobre la calidad del agua, por favor póngase en contacto con el Departamento de Servicios de Agua de la Ciudad de Phoenix al (602) 262-6251. Si usted tiene un pozo privado en el área indicada en el mapa, por favor llame a Ana Vargas, Directora de Proyecto de ADEQ, al (602) 207-4178, ó al 1-800-234-5677, ext. 4178.

¿Cuáles son los riesgos asociados con esta contaminación?

Hay riesgos asociados con la exposición al PCE y TCE, especialmente si se toma el agua contaminada. Las personas que beben agua que contiene PCE en exceso del Nivel Máximo de Contaminación (MCL, siglas en inglés) durante muchos años, podrían tener problemas con el hígado, los riñones o con el sistema nervioso y

pueden aumentar el riesgo de tener cáncer. Las personas que beben agua que contiene TCE en exceso del MCL durante muchos años podrían experimentar problemas con su hígado y pueden aumentar el riesgo de tener cáncer.

Es importante recordar que si su agua es abastecida por un proveedor de agua público como la Ciudad de Phoenix, ellos están obligados a proporcionarle a usted agua potable limpia y segura. La información presentada anteriormente es proporcionada para asegurarse de que el público esté informado de los riesgos potenciales del agua potable que no es analizada regularmente. Si usted está usando un pozo privado en el área indicada en el mapa y su pozo no ha sido analizado, por favor llame a Ana Vargas, Directora de Proyecto de ADEQ, al (602) 207-4178 ó al 1-800 234-5677, ext. 4178, para información respecto a las pruebas de pozos.

¿Cómo puede participar el público?

ADEQ formará una Junta Consultora de la Comunidad en el Area Central al Oeste de Phoenix (CAB, siglas en inglés) para asesorar a ADEQ y a el público sobre temas y preocupaciones relacionados con la limpieza del Area. El CAB del Area Central al Oeste de Phoenix:

- proporcionará comentarios a ADEQ sobre las metas de limpieza, los métodos de limpieza y en otros asuntos relacionados con el Area
- representará a un grupo diversificado de la comunidad en y alrededor del Area
- participará en la comunicación con la comunidad
- conducirá visitas al Area, si se desea.

Si usted desea inscribirse para hacerse miembro del CAB, por favor llene la solicitud adjunta y devuélvala dentro de un período de dos semanas. Para más información, por favor llame a Donna Scott, Coordinadora de Participación de la Comunidad de ADEQ, al (602) 207-4190 ó al 1-800 234-5677, ext. 4190.

Si usted quiere ser incluido en nuestra lista de correo para recibir información futura sobre los sitios, por favor llene la forma adjunta, dóblela, séllela y deposítela en el buzón. Hemos propor-

cionado franqueo para que devuelva la lista de correo y la solicitud de inscripción para el CAB.

A medida que continúe el progreso en el Area Central al Oeste de Phoenix, mantendremos informado al público sobre los últimos hallazgos a través de boletines informativos y reuniones abiertas al público. Las personas interesadas también pueden revisar la información sobre los sitios en la Biblioteca Central Burton Barr, 1221 al Norte de la Avenida Central, Phoenix o en la Sucursal Palo Verde, 4402 al Norte de la Avenida 51, Phoenix.

Información sobre el Area también está disponible en el edificio principal de ADEQ, en el 3033 al Norte de la Avenida Central, Phoenix. Para hacer ésto, favor llame a la archivista al (602) 207-4420 ó al 1-800-234-5677, ext. 4420, para hacer arreglos para revisar el expediente del Area.

¿Qué es el Fondo Rotativo para Asegurar la Calidad del Agua (WQARF, siglas en inglés) y el Registro?

WQARF es un programa establecido por la Legislatura del Estado de Arizona para:

- 1) conducir el monitoreo del agua subterránea y las aguas superficiales a través del estado;
 - 2) estudiar los efectos de la contaminación en la salud;
 - 3) conducir acciones remediales de emergencia; y
 - 4) conducir acciones remediales de largo plazo.
- El programa de WQARF es financiado con fondos, impuestos, cuotas estatales y fondos recuperados de las entidades responsables de la contaminación.

ADEQ ha establecido un registro de sitios en Arizona donde se han localizado contaminantes en el agua subterránea y/o el subsuelo. Los sitios que aparecen en el Registro califican para recibir fondos de WQARF para la investigación y la limpieza de la contaminación. Los cinco Sitios en el Area Central al Oeste de Phoenix están incluidos en el Registro. Los sitios en el Registro reciben un puntaje numérico basado en parte por el tipo de contaminante presente, la ubicación del contaminante y el número de personas que puedan ser afectadas por la contaminación. El puntaje se usa para ayudar a determinar el riesgo relativo en el sitio y no significa necesariamente que haya un riesgo directo para los humanos o el medio ambiente. El puntaje del Sitio del Este de la Avenida Grand es 26 de un total posible de 120.

El puntaje del Sitio del Oeste de la Avenida Grand es 17 de un total posible de 120. El puntaje del Sitio del Norte es 50 de un total posible de 120. El puntaje del Sitio del Canal Norte es 22 de un total posible de 120. El puntaje del Sitio del Complejo Oeste de Osborn es 47 de un total posible de 120.

Contactos de ADEQ:

Si usted está interesado en obtener más información acerca del Area Central al Oeste de Phoenix, por favor llene la tarjeta postal adjunta y/o comuníquese con:

Donna Scott, Coordinadora de Participación de la Comunidad de ADEQ, al (602) 207-4190 ó al 1-800-234-5677, ext. 4190

Ana Vargas, Directora de Proyecto de ADEQ, al (602) 207-4178 ó al 1-800-234-5677, ext. 4178

María Fant, Supervisora de Participación de la Comunidad de ADEQ, al (602) 207-4194 ó al 1-800-234-5677, ext. 4194

Las personas con incapacidad auditiva pueden llamar nuestra línea TDD al (602) 207-4829.

Las oficinas de ADEQ están ubicadas en el 3033 al Norte de la Avenida Central, Phoenix, AZ 85012. Nuestro número de fax es (602) 207-4236. Nuestro número principal del conmutador es (602) 207-2202 ó el 1-800 234-5677.

Por favor visite la Página Web de ADEQ en el <http://www.adeq.state.az.us>. Información sobre éste y otros sitios puede ser encontrada dentro de los Programas Ambientales, División de Programas de Desechos, Sección de Programas del Superfondo.

Glosario

acuífero – Tierra o roca debajo de la superficie de la tierra que contiene agua y puede almacenar y proveer agua a pozos y manantiales.

agua subterránea – Agua que se encuentra debajo de la superficie de la tierra que llena los poros entre los materiales tales como arena, barro o grava. En los acuíferos, el agua subterránea existe en suficientes cantidades como para proveer agua potable, agua para el riego y otros propósitos.

contaminación – Cualquier sustancia peligrosa liberada en el medio ambiente.

disolvente clorinado – Un disolvente orgánico que

contiene átomos de cloro, que se usa en embases de rocío aerosol, en pintura para carreteras y en líquidos para lavado en seco.

Estudio de Factibilidad (FS, siglas en inglés) –

Un estudio que describe y analiza las opciones de limpieza potenciales para un sitio contaminado usando la información de la Investigación Remedial. El Estudio de Factibilidad usualmente recomienda la selección de una opción de limpieza que es práctica y su costo es eficiente.

extracción de vapor del subsuelo (SVE, siglas en inglés) –

La extracción de vapor del subsuelo es una técnica usada comúnmente para limpiar subsuelos contaminados. La extracción de vapor del subsuelo extrae el aire que corre a través del subsuelo contaminado y transfiere los contaminantes al aire. El aire contaminado entonces es tratado o descargado, dependiendo de la cantidad y tipo de contaminación presente.

Fondo Rotativo para Asegurar la Calidad del Agua (WQARF, siglas en inglés) –

También conocido como el "Superfondo Estatal." WQARF es un programa administrado por ADEQ para: (1) conducir el monitoreo del agua subterránea y las aguas superficiales a través del estado; (2) estudiar los efectos de la contaminación en la salud; (3) conducir acciones remediales de emergencia; y (4) conducir acciones remediales de largo plazo.

Investigación Remedial (RI, siglas en inglés) –

Un estudio a fondo diseñado para reunir los datos necesarios para determinar la naturaleza y la extensión de la contaminación en un sitio.

limpieza – Acciones tomadas que tienen que ver con la liberación o amenaza de liberación de una sustancia peligrosa que pudiera afectar a la gente o al medio ambiente. El término "limpieza" es algunas veces intercambiado con los términos "acción remedial," "acción de removido," "acción de respuesta," "remedio," "remediación" o "acción correctiva."

Nivel Máximo de Contaminación (MCL, siglas en inglés) –

El nivel máximo de un contaminante que es permitido en el agua subterránea y agua potable. Las agencias estatales y federales fijan estas normas para la protección de la salud humana.

pozos de observación – Pozos instalados con el propósito de recoger muestras del agua subterránea y gas en el subsuelo. Los resultados analíticos de estas muestras son usados para definir la extensión de la contaminación.

sustancia peligrosa – Cualquier material que, debido a su cantidad, concentración o características físicas o químicas, presenta un peligro existente o potencial a la salud y seguridad humana o el medio ambiente.

Arizona Department of Environmental Quality
3033 N. Central
Room 755
Phoenix, Arizona 85012-9918

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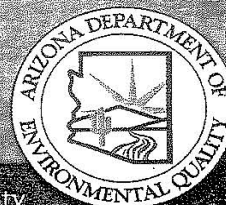
Inside: Information from the Arizona Department of
Environmental Quality on the West Central Phoenix Area

Contenido: Información del Departamento de Calidad Ambiental
de Arizona acerca del Area Central al Oeste de Phoenix



#FS99-13
A.R.S. § 49-289.02
APRIL 2000

West Central Phoenix WQARF Area News



March 2001 • Published by the Arizona Department of Environmental Quality

Since 1987, the Arizona Department of Environmental Quality (ADEQ) has been conducting an investigation in the West Central Phoenix (WCP) Area (see map on page 2) to learn more about the presence of *contamination* in the soil and *groundwater*. In the summer of 1998, the West Central Phoenix Area was split into the five Sites listed on the map. *Remediation* (clean up) and

investigation work at the site is funded and managed by the State's Superfund Program, also known as the Water Quality Assurance Revolving Fund (WQARF).

The purpose of this newsletter is to provide information to the community about the environmental project and opportunities to participate in the public process.

• *Italicized terms are defined in the glossary on page 3 •*

See
the CAB
application inside

COMMUNITY ADVISORY BOARD MEMBERS NEEDED!

*How you can serve your community while learning
about the environment*

- Are you concerned about the environment and protecting public health?
- Do you live, work, own property or a business in the West Central Phoenix area and/or are you interested in the project?
- Would you like to learn more about environmental investigations and cleanup techniques?
- Do you have a minimum of two hours a day, four times a year to volunteer?

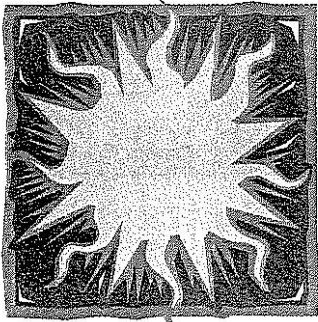
If you answered yes to any of the questions above, you may be interested in applying for the WCP community advisory board (CAB)! No technical experience is necessary, only an interest to serve as a public member to share community issues and concerns related to the site clean up.

- **How do you apply?** Simply complete the application inside and mail it in by April 13, 2001.
- **Who are the CAB members? How are they selected?** Membership is comprised of a diversified cross section of community members who apply. Additional members will be considered at a regularly scheduled CAB meeting.

- **What happens at a CAB meeting?** The ADEQ project manager and community involvement coordinator present updates about the project, including information about investigation results, cleanup progress, and community outreach activities. The CAB members may request additional information and offer suggestions on ADEQ's cleanup goals and methods.
- **How many times does the CAB meet?** Based on state law, the group is required to meet with ADEQ a minimum of four times per year, although they may choose to hold more meetings.
- **What else do CAB members do?** They can participate in community outreach and make site visits if desired.
- Since you are serving as a volunteer, you will not be paid for your time; however, your efforts will be valued by the community.

To apply for the CAB, please complete and return the enclosed application by April 13, 2001. For more information, contact Donna Scott, ADEQ Community Involvement Coordinator, at (602) 207-4190 or toll-free in Arizona at (800) 234-5677, Ext. 4190.

Background on the West Central Phoenix Area



As mentioned on page 1, ADEQ is conducting an investigation in the West Central Phoenix Area to learn more about the presence of contamination in the soil and groundwater.

Contamination in the area was first detected in the groundwater in July 1982. The City of Phoenix found the chlorinated cleaning solvent trichloroethylene (TCE) in four city water supply wells in the West Central Phoenix Area. The two wells with the highest concentrations of TCE were shut down in 1982. Monitoring continued on the other two wells to make sure that they met safe drinking water standards. The City of Phoenix closed the last two wells in 1989.

After the initial discovery, extensive groundwater sampling in the West Central Phoenix Area was conducted by the Arizona Department of Health Services (ADHS), the City of Phoenix, and Salt River Project. The sampling verified the presence of chlorinated solvents in city wells and irrigation wells in the West Central Phoenix Area. ADEQ has done extensive soil and groundwater sampling and analysis.

In 1984, a survey was taken of more than 400 area businesses that might have stored, handled, or disposed of *hazardous substances*. Based on that investigation, it was determined that the contamination came from several sources. In 1987, West Central Phoenix was placed on the State's Water Quality Assurance Revolving Fund priority list.

Contaminants known to be present at levels above regulatory limits at the West Central Phoenix Area include the solvents TCE and tetrachloroethylene (PCE) which are present in the groundwater and in some soils.

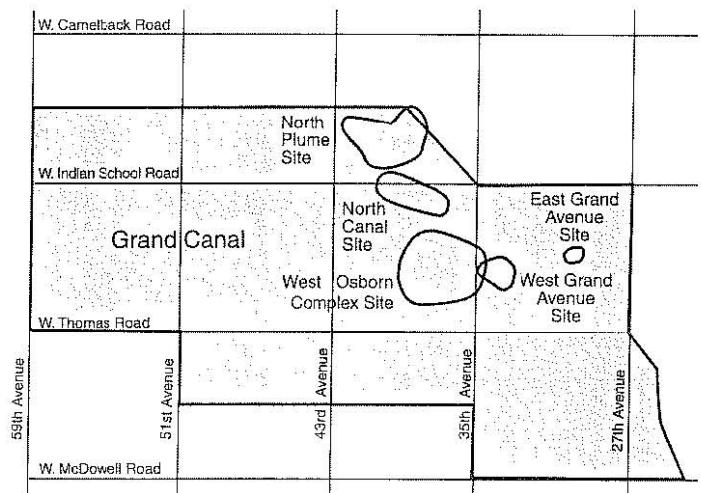
What's going in now?

ADEQ is currently conducting the *remedial investigation* at several of the West Central Phoenix sites. Soil and soil-gas sampling, monitor well installation, water

level measurements, and groundwater sampling activities are ongoing to define the extent of contamination. The information collected from these investigations will help ADEQ determine how to clean up these sites.

Questions about the quality of your water?

The groundwater under the West Central Phoenix Area is not used in the public drinking water system. If you are connected to a public drinking water system, your public water provider, the City of Phoenix, is required by law to provide water that meets all state and federal drinking water standards. The City of Phoenix conducts regular testing of your drinking water delivered to the community. For more information on your water quality, please contact the City of Phoenix Water Services at (602) 262-6151. If you are using a private well in the area shown on the map below and would like information regarding well testing, please call Ana Vargas, ADEQ Project Manager, at (602) 207-4178.



West Central Phoenix Area

Mailing List Form and Community Advisory Board Application



Mr./Mrs./Ms. (please circle) Name: _____

Address: _____ Zip code: _____

Mailing address: _____ Email address: _____

Phone number: (home) _____ (work) _____

Would you like to receive future mailings in English? ☐ or Spanish? ☐ (please check box)

Querian recibir envios futuro en ingles? ☐ or en espanol? ☐

Occupation: _____ Employer: _____

How long have you lived in/near West Central Phoenix? _____

Are you willing to make a commitment to serve on the Board for at least 1 year? _____

Are you able to attend at least four meetings a year? _____

What day(s)/time(s) would be best for you to attend meetings? _____

Please explain why you would like to serve on the Community Advisory Board:

[illegible]

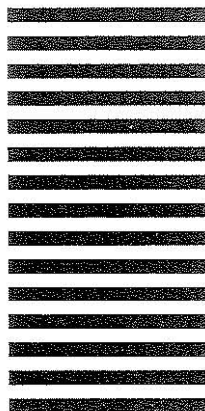
Please fold and tape this form before mailing (no staples).

Questions? Contact Donna Scott at (602) 207-4190. You will be notified by mail regarding the status of your application. Thank you for your interest.

ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY
3033 N CENTRAL AVE
PHOENIX, AZ 85012



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ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY
3033 N CENTRAL AVE
PHOENIX AZ 85012-9818



Get Involved!

As progress continues in the West Central Phoenix Area, we will keep the public informed of the latest findings through newsletters and public open houses. If you would like to be notified of the CAB meetings, please contact Donna Scott, ADEQ Community Involvement Coordinator, at (602) 207-4190 or toll-free in Arizona at (800) 234-5677, Ext. 4190. Please remember to return the enclosed CAB application by Friday, April 13, 2001, if you would like to be considered for membership.

Interested parties can review site information at ADEQ's main facility at 3033 N. Central, Phoenix. To do so, please call the file clerk at (602) 207-4420 to arrange review of the site file.

For further information on this site or other WQARF sites, please visit the ADEQ web site at www.adeq.state.az.us. Click on Environmental Programs, then Waste Programs Division, scroll down to Superfund (WQARF/NPL) Programs and follow the prompts for the information you need. A hard copy of the information on the web site is available in the Superfund Programs Section Information Booklet; it may be purchased by contacting the information desk at (602) 207-2202, or toll free in Arizona at (800) 234-5677, Ext. 2202.

ADEQ Contacts:

Donna Scott
ADEQ Community Involvement Coordinator:
(602) 207-4190 or (800) 234-5677, Ext. 4190
scott.donna@ev.state.az.us

Ana Vargas, ADEQ Project Manager:
(602) 207-4178 or (800) 234-5677, Ext. 4178,
vargas.ana@ev.state.az.us

Hearing impaired persons may call our TDD line at (602) 207-4829.

ADEQ offices are located at 3033 N. Central Ave., Phoenix, AZ 85012. Our fax number is (602) 207-4236. Our main switchboard number is (602) 207-2202.

GLOSSARY

Contamination — Any hazardous substance released into the environment.

Groundwater — Water found beneath the earth's surface that fills pores between materials such as sand, clay, or gravel. In aquifers, groundwater occurs in sufficient quantities that can be used for drinking water, irrigation, and other purposes.

Hazardous Substance — Any material that, because of its quantity, concentration, or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment.

Remediation — Actions taken that deal with the release or threat of a release of a hazardous substance that could affect people or the environment. The term "cleanup" is sometimes used interchangeably with the terms remedial actions, removal actions, response action, remedy, remediation, or corrective action.

Remedial Investigation — An in-depth study designed to gather the data necessary to determine the nature and extent of contamination at a site.

Arizona Department of Environmental Quality
3033 N. Central
Room 755
Phoenix, Arizona 85012



**West Central Phoenix
WQARF Area News**

**Inside: Project Update and
Community Advisory Board Application**

#FS01-04
MARCH 2001



Janet Napolitano, Governor
Stephen A. Owens, ADEQ Director

West Central Phoenix WQARF Site **UPDATE**

West Central Phoenix (WCP) Water Quality Assurance Revolving Fund (WQARF) Site - September 2004

The purpose of this newsletter is to provide information to the community about the environmental project and opportunities to participate in the public process.

Italicized terms are defined in the glossary.

BACKGROUND

Since 1987, the Arizona Department of Environmental Quality (ADEQ) has been conducting an investigation in the West Central Phoenix (WCP) area to learn more about the presence of *contamination* in the soil and *groundwater*. In the summer of 1998, the West Central Phoenix area was split into the five sites listed on the map. *Remediation* (cleanup) and investigation work at the site is funded and managed by the State's Superfund Program, also known as the *Water Quality Assurance Revolving Fund (WQARF)*.

ADEQ is conducting an investigation in the West Central Phoenix area to learn more about the presence of contamination in the soil and groundwater. Contamination in the area was first detected in the groundwater in July 1982. The city of Phoenix found the chlorinated cleaning solvent trichloroethylene (TCE) in four city water supply wells in the West Central Phoenix area. The two wells with the highest concentrations of TCE were shut down in 1982. Monitoring continued on the other two wells to make sure that they met safe drinking water standards. The City of Phoenix closed the last two wells in 1989.

After the initial discovery, extensive groundwater sampling in the West Central Phoenix area was conducted by the Arizona Department of Health Services (ADHS), the City of Phoenix, and Salt River Project. The sampling verified the presence of chlorinated solvents in city wells and irrigation wells in the West Central Phoenix area. ADEQ has

Community Advisory Board Members Needed!

(See the CAB Application Inside)

How You Can Serve Your Community While Learning About the Environment

- Are you concerned about the environment and protecting public health?
- Do you live, work, own property or a business in the West Central Phoenix area and/or are you interested in the project?
- Would you like to learn more about environmental investigations and cleanup techniques?
- Do you have a minimum of two hours a day, four times a year to volunteer?

If you answered yes to any of the questions above, you may be interested in applying for the WCP Community Advisory Board (CAB)! No technical experience is necessary, only an interest to serve as a public member to share community issues and concerns related to the site cleanup.

- **How do you apply?** Simply complete the application inside and mail it in by October 11, 2004.
- **Who are the CAB members?** How are they selected? Membership is comprised of a diversified cross-section of community members who apply. Additional members will be considered at a regularly scheduled CAB meeting.
- **What happens at a CAB meeting?** The ADEQ project manager and community involvement coordinator present updates about the project, including information about investigation results, cleanup progress, and community outreach activities. The CAB members may request additional information and offer suggestions on ADEQ's cleanup goals and methods.
- **How many times does the CAB meet?** Based on state law, the group is required to meet with ADEQ a minimum of four times per year, although they may choose to hold more meetings.
- **What else do CAB members do?** They can participate in community outreach and make site visits if desired.
- Since you are serving as a volunteer, you will not be paid for your time; however, your efforts will be valued by the community.

To apply for the CAB, please complete and return the enclosed application by October 11, 2004. For more information, contact Monica Mascareno, ADEQ Community Involvement Coordinator, at (602) 771-4710 or toll free in Arizona (800) 234-5677.

done extensive soil and groundwater sampling and analysis.

In 1984, a survey was taken of more than 400 area businesses that might have stored, handled, or disposed of *hazardous substances*. Based on that investigation, it was determined that the contamination came from several sources. In 1987, West Central Phoenix was placed on the State's Water Quality Assurance Revolving Fund priority list.

Contaminants known to be present at levels above regulatory limits at the West Central Phoenix area include the solvents TCE and tetrachloroethylene (PCE) which are present in the groundwater and in some soils.

WHAT'S GOING ON NOW?

ADEQ is currently conducting the *remedial investigation* at the five West Central Phoenix sites: East Grand Avenue, North Canal Plume, West Grand Avenue and West Osborn Complex. Soil and soil-gas sampling, monitor well installation, water level measurements, and groundwater sampling activities are ongoing to define the extent of contamination. The information collected from these investigations will help ADEQ determine how to clean up these sites.

QUESTIONS ABOUT THE QUALITY OF YOUR WATER?

The groundwater under the West Central Phoenix area is not used in the public drinking water system. The City of Phoenix is the public drinking water provider for the West Central Phoenix area. The City of Phoenix is required by law to provide water that meets all state and federal drinking water standards. The City of Phoenix conducts regular testing of the drinking water that is delivered to your community. For more information on your water quality, please contact the City of Phoenix Water Services at (602) 262-6151. If you are using a private well in the area shown on the map below and would like information regarding well testing, please call Ana Vargas, ADEQ Project Manager, at (602) 771-4178.

GET INVOLVED!

As progress continues in the West Central Phoenix area, we will keep the public informed of the latest findings through newsletters and meetings. If you would like to be notified of the CAB meetings, please contact Monica Mascareno, ADEQ Community Involvement Coordinator, at (602) 771-4710 or toll free in Arizona at (800) 234-5677. **Please remember to return the enclosed CAB application by October 11, 2004, if you would like to be considered for membership.**

Interested parties can review site information at ADEQ's main facility at 1110 W. Washington Street, in Phoenix, Arizona. To do so, please call the Records Management Center to make an appointment, at least 24 hours in advance, at (602) 771-4380.

For further information on the site or other WQARF sites, please visit our web site at: azdeq.gov. Follow the prompts for the information you need. A hard copy of the information on the web site is available in the Superfund Program Section Information Booklet; it may be purchased by contacting the General Services desk at (602) 771-7638 or toll free in Arizona at (800) 234-5677.

ADEQ CONTACTS

Monica Mascareno

ADEQ Community Involvement Coordinator
(602) 771-4710 or (800) 234-5677

E-mail: mascareno.monica@azdeq.gov

Ana Vargas

ADEQ project Manager
(602) 771-4178 or (800) 234-5677

E-mail: vargas.ana@azdeq.gov

Hearing impaired persons call ADEQ's TDD line: (602) 771-4829

ADEQ offices are located at:
1110 W. Washington Street
Phoenix, Arizona 85007
main number: (602) 771-2202
fax: (602) 771-4246



Janet Napolitano, Governor
Stephen A. Owens, ADEQ Director

West Central Phoenix (WCP) Water Quality Assurance Revolving Fund (WQARF) Area Community Advisory Board (CAB) Membership Application

First Name: _____ Last Name: _____

Organization / Association: _____

Address: _____ Zip code: _____

Mailing address: (if different from above)

_____ Zip code: _____

Occupation: _____ Employer: _____

Phone numbers: (home:) _____ (work:) _____

(mobile:) _____ (other:) _____

Email address: _____

How long have you lived in the area? _____

Are you willing to make a commitment to serve on the CAB for at least 1 year? ☐ Yes ☐ No (please check box)

Are you able to attend at least four meetings a year? ☐ Yes ☐ No (please check box)

**Please explain why you would like to serve on the Community Advisory Board
(attach a separate sheet if needed):**

Please complete and return this application. Please fold and tape this form before mailing (no staples).

PARA INFORMACIÓN EN ESPAÑOL, LLAME AL (602) 771-4710

GLOSSARY

Contamination - Any hazardous substance released into the environment.

Groundwater - Water found beneath the earth's surface that fills pores between materials such as sand, clay or gravel. In aquifers, groundwater occurs in sufficient quantities that it can be used for drinking water, irrigation and other purposes.

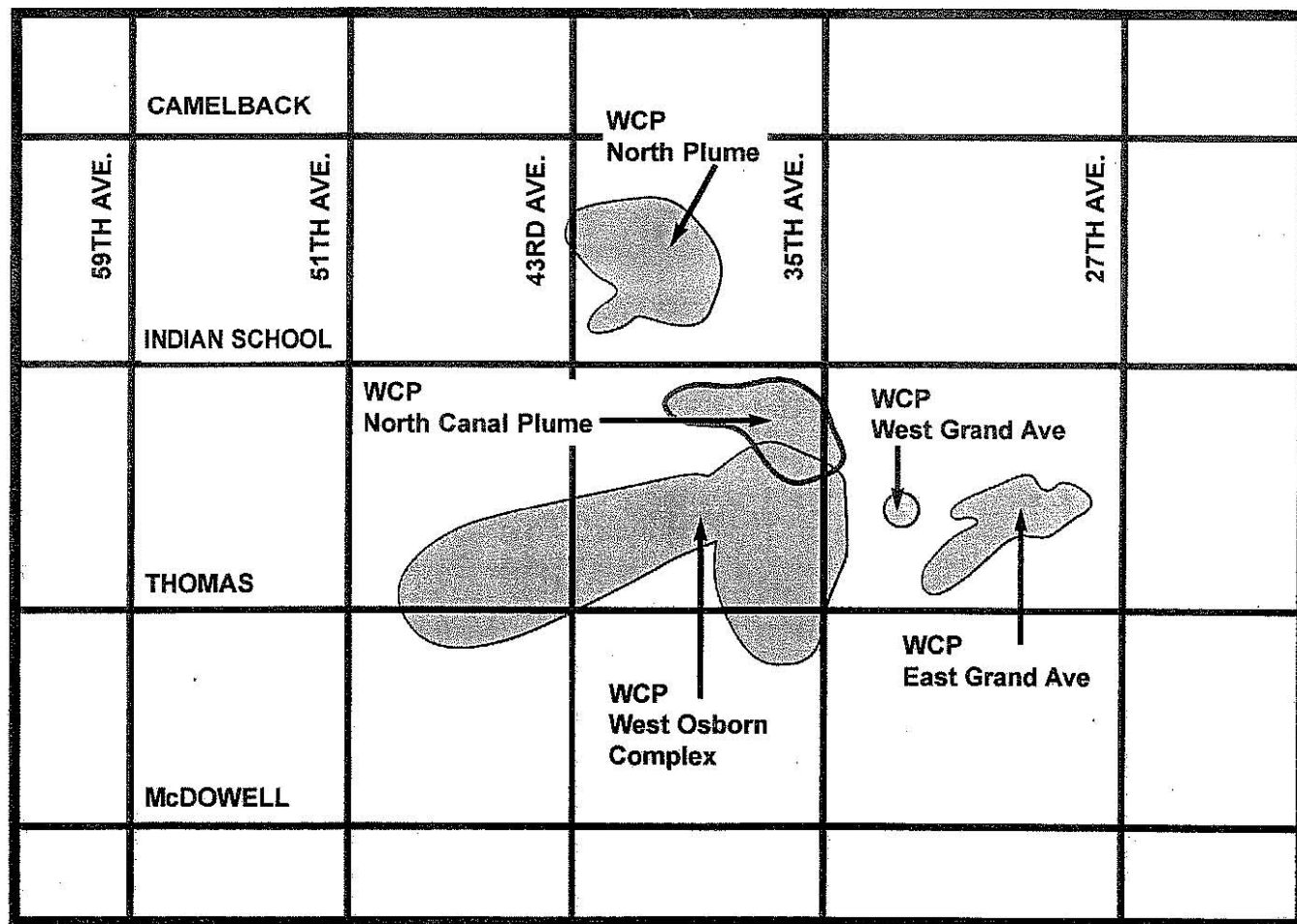
Hazardous Substance - any material that, because of its quantity, concentration, or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment.

Remediation - Actions taken to deal with the release of a hazardous substance that could affect people or the environment. The term "cleanup" is sometimes used interchangeably with the terms remedial action, removal action, response action, remedy.

Remedial Investigation - An in-depth study designed to gather the data necessary to determine the nature and extent of contamination at a site.

Water Quality Assurance Revolving Fund (WQARF) - A program administered by ADEQ to (1) conduct statewide surface and groundwater monitoring; (2) study health effects; (3) perform emergency remedial actions; and (4) conduct long-term remedial action programs. Also known as "State Superfund."

West Central Phoenix (WCP) Water Quality Assurance Revolving Fund (WQARF) Sites



IMPORTANT INFORMATION FOR YOU FROM



CONCERNING
West Central Phoenix WQARF Area News
Inside: Project Update and
Community Advisory Board Application

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SITE UPDATE

West Central Phoenix Water Quality Assurance Revolving Fund Site February 2007

This fact sheet is a publication of the Arizona Department of Environmental Quality (ADEQ) to inform community members near the West Central Phoenix (WCP) Water Quality Assurance Revolving Fund (WQARF) sites of current site activities.

BACKGROUND

ADEQ has been conducting an investigation in the WCP Area to learn more about soil and groundwater contamination* in the Area since 1987, when the WCP Area was made a state Superfund Site under WQARF. In the summer of 1998, the WCP Area was split into the five sites listed on the map (See page 5). Remediation (clean up) and investigation work at the site is funded and managed by WQARF.

Contamination in the area was first detected in the groundwater in July 1982. The City of Phoenix found the chlorinated cleaning solvent trichloroethylene (TCE) in four city water supply wells in the WCP Area. The two wells with the highest concentrations of TCE were shut down in 1982. Monitoring continued on the other two wells to make sure that they met safe drinking water standards. The city of Phoenix closed the last two wells in 1989, when the concentrations became unsafe.

After the initial discovery, extensive groundwater sampling in the WCP Area was conducted by the Arizona Department of Health Services (ADHS), the City of Phoenix, and Salt River Project. The sampling verified the presence of chlorinated solvents in city wells and irrigation wells in the WCP Area.

In 1984, a survey was taken of more than 400 area businesses that might have stored, handled, or disposed of hazardous substances. Based on that investigation, it was determined that contamination came from several sources.

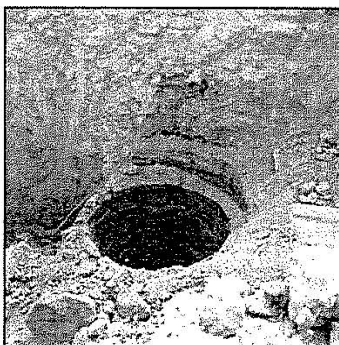
The primary contaminants known to be present at levels above regulatory limits at the WCP Area include the solvents TCE and tetrachloroethylene (PCE), which are present in the groundwater and in some soils.

UPDATE ON THE WCP WEST OSBORN COMPLEX SITE

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 TCE and other chemicals in the production and cleaning process.

Through discussions with former employees, 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.



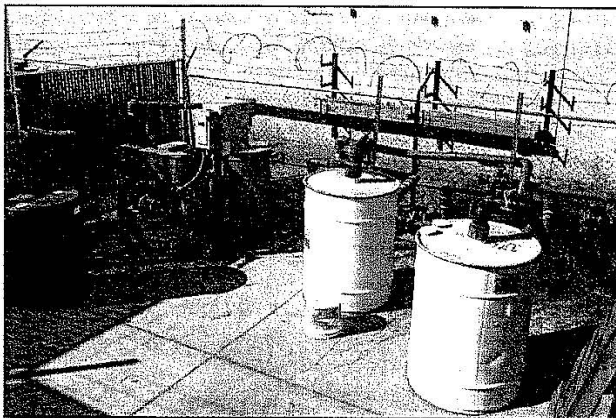
A closer look at a seepage pit.

Field investigation activities for the WCP WOC Site have been conducted between 1989 and the present time. The investigation indicates that the source of soil and groundwater contamination in the WCP WOC Site is the WOC property.

In May 1996, ADEQ entered into a Consent Decree (legal settlement) with United

Industrial Corporation (United), a firm formerly operating at the property. United agreed to conduct a Remedial Investigation/Feasibility Study (RI/FS), reimburse past costs and pay oversight costs.

United operated a soil vapor extraction (SVE) system from August 1999 through October 2002 to remediate the



SVE system at WOC facility.

**Italicized terms are defined in the glossary located at the end of this fact sheet.*

contamination beneath the WOC property. United completed the soil cleanup at the property and permanently shut down the SVE system in March 2004.

In August 2004, 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 (A.R.S.) §49-287.03 and Arizona Administrative Code (A.A.C.) R18-16-406. No comments were received during the 30-day comment period.

In April 2005, ADEQ issued the Proposed *Remedial Objectives* (RO) report for the WCP WOC Site 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 2005. 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.

United is currently conducting the FS to evaluate specific remedial measures and strategies required to meet the remedial objectives so that the groundwater can be remediated. In June 2006, as part of the FS, United installed additional monitoring wells to further define the extent of shallow groundwater contamination emanating from the WOC property.

UPDATE ON THE WCP NORTH PLUME SITE

Four facilities have been identified as likely sources of the groundwater contamination in the WCP North Plume Site. The four facilities are as follows: the F&B Mfg. Co. (F&B) facility, former Pyramid Industries, Inc. (Pyramid) facility, former Rinchem facility, and Hill Brothers facility. Field investigation activities at the four facilities in the WCP North Plume site have been conducted since 1984.

The F&B facility is located near 39th Avenue and Montecito Avenue. Since 1967, F&B has been manufacturing metal aircraft and spacecraft parts and performing sheet metal forming, and assembly. Solvents are used as degreasing agents to clean the surface of the metals. PCE was used as the degreasing solvent until approximately October 1987, when it switched to 1,1,1-trichloroethane (TCA). In April 1991, ADEQ discovered information that PCE had leaked from F&B's degreaser into the soil under the building.

The former Pyramid Industries, Inc. facility is also located at near 39th Avenue and Montecito Avenue, across from the F&B facility. Pyramid operated a telephone and television cable riser boxes manufacturing facility from 1977 to 1994. Operations at the facility required the use of acids, caustics, heavy metals, paints, and methylene chloride. Several suspected sources of contamination have been identified on the Pyramid facility, including the loading dock/dry well, paint room, and historic hook cleaner.

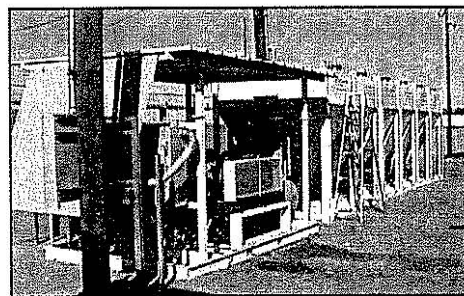
The former Rinchem facility is located near 41st Avenue and Turney Avenue. Rinchem operated a chemical warehouse and distribution facility that handled solvents, oils, and

fuels. Rinchem was the only company that operated at the facility from facility construction in 1982 through June 1993. Several suspected sources have been identified on the Rinchem facility, including the former repackaging area and former tank farm.

The Hill Brothers facility is located near 42nd Avenue and Turney Avenue. The Hill Brothers facility has operated as a chemical distribution facility at this location since 1969. Chemicals that include acids, bases, solvents, chlorine, and concrete additives were stored in above ground storage tanks on-site prior to transfer into containers for distribution.

Field investigation activities for the WCP North Plume site have been conducted between 1984 and the present time. Several contaminants have been detected in soil and groundwater samples collected during field investigations at the four facilities. The primary contaminants of concern are PCE, TCE, and 1,1-dichloroethene (1,1-DCE).

In late 1992, ADEQ entered into a Consent Decree with F&B to conduct an RI/FS, remediate PCE-contaminated soil on-site, reimburse past costs and pay oversight costs. From 1995 until 1998, F&B was financially unable to fulfill the requirement under the Consent Decree. Between 1998 and 1999, ADEQ and F&B Mfg. Co. negotiated a new Consent Decree, which was approved by the Court in August 1999. Under the new Consent Decree, ADEQ will be completing the RI/FS and will conduct the remediation of the facility.



SVE system at F&B facility.

ADEQ has been operating an SVE system at the F&B facility since August 2001 to remediate the PCE contamination beneath the vapor degreaser.

In addition, ADEQ removed approximately 210 cubic yards of soil beneath the vapor degreaser during two excavations in July 2000 and September 2001. As of April 2006, 40,857 pounds of PCE have been removed from the source area by the SVE system.

In August 2006, ADEQ issued the draft RI report for the WCP North Plume Site for public comment to meet the requirements established under A.R.S. §49-287.03 and A.A.C. R18-16-406.

UPDATE ON THE WCP NORTH CANAL PLUME SITE

Several facilities have been identified as likely sources of the groundwater contamination in the WCP North Canal Plume Site. The facilities include, but not limited to: the former Osborn Products facility, former Magic Metals facility, former Southwest Metals facility, and Precise Metal

Products/Paraflex Tool & Machine (Precise/Paraflex). Other facilities are currently being investigated as potential sources of groundwater contamination at the Site. Field investigation activities at the WCP North Plume site have been conducted since 1984.

The former Osborn Products facility is located near 36th Avenue and Clarendon Avenue. Osborn Products operated at the site from 1956 to 1984. Facility operations included chrome plating, machining, and grinding of parts for the aerospace industry. Onsite processes included degreasing metal parts, chrome plating, and machining of parts to specification.

The former Magic Metals facility is located near 36th Avenue and Whitton Avenue. Magic Metals operated at the site from 1977 to 1987, when the facility was abandoned by the company. Principal business activities of Magic Metals included electroplating for automobiles, custom restorations, industrial parts, and antiques. The facility generated waste electroplating baths and rinses containing cyanide, waste caustics and unspecified waste solvents from stripping tanks, and waste acids (sulfuric and chromic). Those tanks were excavated and removed from the facility in 1989.

The former Southwest Metals facility is also located near 36th Avenue and Clarendon Avenue, across from the former Osborn Products facility. Southwest Metals operated at this property from 1952 to 1973. The manufacturing process at the site consisted of constructing sand casts to form magnesium, aluminum, and brass castings.

The Precise/Paraflex facility is located near 39th Avenue and Clarendon Avenue. Precise/Paraflex and three subsidiary companies, Precision Marking, Paint Spray, Inc., and Perigee Metal Spinning, have operated at this property since 1963.

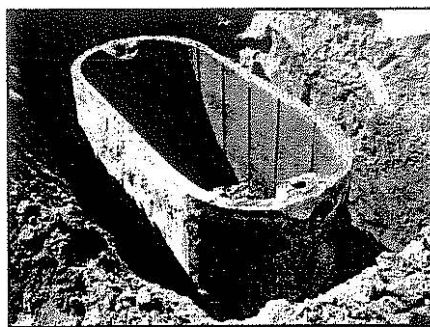
Field investigation activities for the WCP North Canal Plume site have been conducted between 1984 and the present time. Several contaminants have been detected in soil and groundwater samples collected during field investigations at the four facilities. The primary contaminants of concern are PCE, TCE, 1-DCE and chromium.

ADEQ continues the RI investigative activities by installing groundwater monitoring wells, as well as collecting soil and soil-gas samples. ADEQ also continues with the investigation of several facilities in the area to determine if they are also sources of the groundwater contamination.

ADEQ plans to complete the field investigative activities by June 2007. The draft RI report is expected to be issued for public comment by December 2007. In addition, ADEQ will be installing an SVE system at the former Osborn Products facility to cleanup the soils beneath the property.

UPDATE ON THE WCP WEST GRAND AVENUE SITE

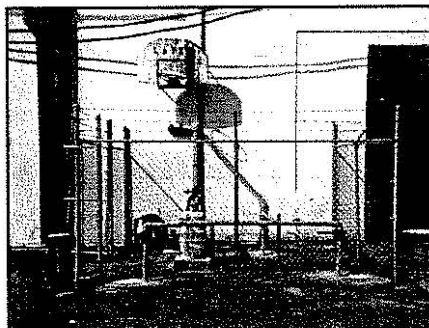
Field investigation activities at the WCP West Grand Avenue Site were conducted between 1989 and 2002. The investigation indicated that the source of soil and ground-



UST at Layke facility.

the manufacturing of various metal parts. TCE was the primary solvent used for parts cleaning/degreasing and a vapor degreaser had been used at the facility from 1969 to approximately 1989. Used chemicals were stored in 55-gallon drums in the waste storage area or in an underground storage tank (UST) prior to disposal. At various times, it appears that the UST overflowed, causing the waste inside the tank to leak out. The UST was removed in October 1990.

Layke operated a SVE system from March 1995 through June 1998 to remediate the contamination beneath the UST.



SVE system at Layke facility.

Between 2001 and 2002, soil samples were collected by ADEQ in the area of the UST to determine the effectiveness of the SVE system in cleaning up the soils. The soil data indicated that the contamination had been effectively remediated by the SVE system. Based on this information, ADEQ granted a No Further Action (NFA) request in December 2002, pursuant to A.R.S. §49-287.01.

In February 2004, ADEQ issued the draft RI report for the WCP West Grand Avenue Site for public comment to meet the requirements established under A.R.S. §49-287.03 and A.A.C. R18-16-406. No comments were received during the 30-day comment period. Since no comments were received on the draft RI report, this report will be accepted as the final RI report for the Site.

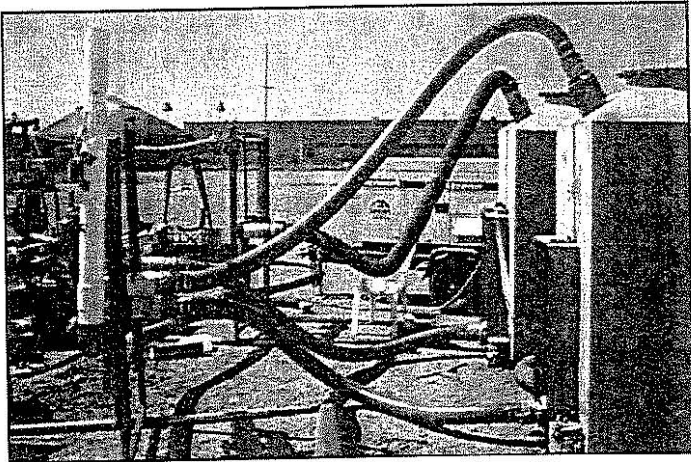
In October 2005, ADEQ issued the Proposed RO report for the WCP West Grand Avenue Site for public comment to meet the requirements established under A.A.C. R18-16-406. No comments were received during the 30-day comment period. ADEQ has yet to issue the final RO report.

UPDATE ON THE WCP EAST GRAND AVENUE SITE

The former Van Waters & Rogers (VW&R) facility is the primary source of contamination at the WCP East Grand Avenue Site.

VW&R operated near 27th Avenue and Osborn Road from 1957 to 1970. Operations included warehousing and distribution of industrial and agricultural chemical products, upholstery supplies, and laundry and dry cleaning supplies.

The RI field investigative activities at this site were conducted between 1993 and 2002. In January 2002, ADEQ entered into an agreement with Univar (parent company of VW&R) to conduct the monitoring groundwater quality and to conduct the FS.



SVE system at VW&R facility.

Since March 2003, groundwater monitoring has been conducted by Univar. Also in 2003, Univar installed an SVE system at the former W&R facility to clean up the soils. The SVE system became operational in January 2004.

In May 2004, ADEQ issued the draft RI report for the WCP East Grand Avenue Site for public comment to meet the requirements established under A.R.S. §49-287.03 and A.A.C. R18-16-406. Comments were received during the 30-day comment period.

In January 2006, ADEQ issued the Proposed RO report for the WCP East Grand Avenue Site 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 June 2006. In addition, since comments were received on the draft RI report, a responsiveness summary was prepared and the final RI report for the Site was also issued in July 2006.

Univar will be conducting the FS to evaluate specific remedial measures and strategies required to meet the remedial objectives.

WHAT ARE THE RISKS ASSOCIATED WITH THIS CONTAMINATION?

To date, testing in the WCP Area indicates no public 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.

WHAT IS A LOCAL COMMUNITY ADVISORY BOARD (CAB)?

A very important means for ADEQ to communicate with the public at the West Central Phoenix Sites is through the Community Advisory Board (CAB). A CAB has been formed for the site and meets on a regular basis. The primary purpose of the CAB is to advise ADEQ and the public of issues and concerns related to the remediation of the Site. These meetings are open to the public. The CAB meeting agendas and minutes can be viewed at: <http://www.azdeq.gov/environ/waste/sps/reg.html>

The responsibilities of the CAB include:

- Participating in community outreach
- Assisting in distributing information from ADEQ to the community
- Ensuring that ADEQ understands the opinions and concerns of the residents
- Providing comments to ADEQ on various remediation techniques and other site-related issues

If you would like to apply to become a member of the Community Advisory Board or be notified of the CAB meetings, which are open to the public, please contact:

Linda Mariner,
Community Involvement Coordinator
(602) 771-4294
E-mail: mariner.linda@azdeq.gov

WHAT IS THE WATER QUALITY ASSURANCE REVOLVING FUND (WQARF)?

WQARF is a program established by the Arizona State Legislature to:

- 1) conduct statewide surface and groundwater monitoring;
- 2) study health effects;
- 3) perform emergency remedial actions; and
- 4) conduct long-term remedial action programs.

The WQARF program is funded with state monies, civil and criminal penalties, and funds recovered from parties responsible for contamination.

INFORMATION REPOSITORIES

Interested parties can review site information at the Information Repository at the Burton Barr Central Library (Arizona Room, under Government Documents) located at 1221 North Central Avenue in Phoenix (602) 262-4636.

Also, with 24 hours notice an appointment to review relating documentation is available 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. Please contact (602) 771-4380, (800) 234-5677 or TDD line (602) 771- 4829 to schedule an appointment to review these documents.

ADEQ CONTACTS

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GLOSSARY

Contamination - Any hazardous substance released into the environment.

Feasibility Study (FS) - An in-depth study designed to evaluate the remedial alternatives that may be implemented to clean up the site.

Groundwater - Water found beneath the earth's surface that fills pores between materials such as sand, clay, or gravel. In aquifers, groundwater occurs in sufficient quantities that can be used for drinking water, irrigation and other purposes.

Hazardous Substance - Any material that, because of its quantity, concentration, or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment.

Remediation - Actions taken to treat the release or threat of release of a hazardous substance that could affect people or the environment. The term "cleanup" is sometimes used interchangeably with the terms remedial action, removal actions, response actions, remedy, remediation, or corrective action.

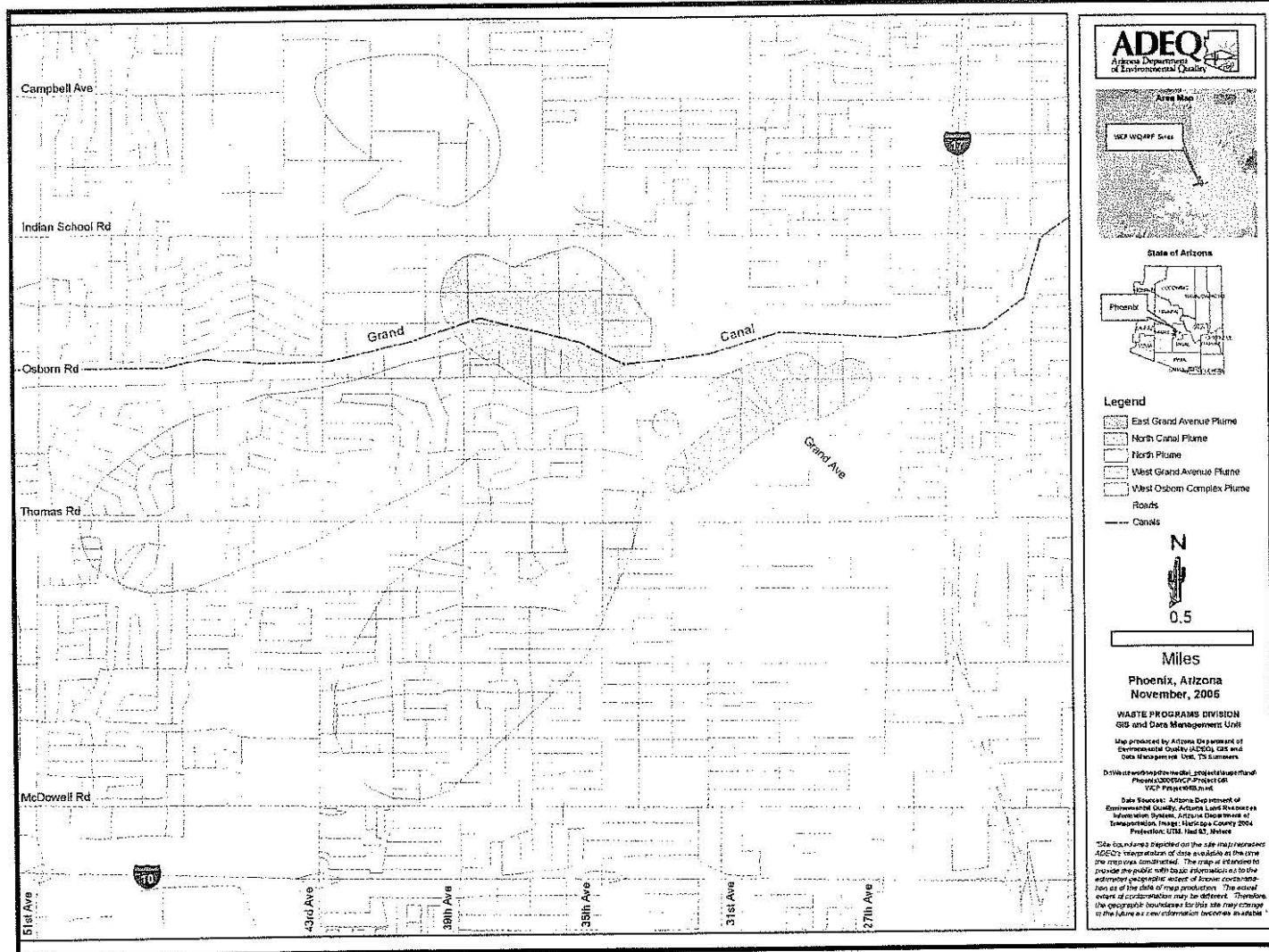
Remedial Investigation (RI) - An in-depth study designed to gather the data necessary to determine the nature and extent of contamination at a site.

Remedial Objectives (RO) - Established for the current and reasonably foreseeable uses of land and waters of the state that have been or are threatened to be affected by a release of a hazardous substance.

Soil Vapor Extraction (SVE) - A commonly used technique to clean up contaminated soils. SVE draws air through contaminated soils and the contaminants are transferred to the air. The contaminated air is then treated or discharged, depending on the amount and type of contamination present.

Solvent - Chemical products, usually liquid, that are used to dissolve other substances.

West Central Phoenix Superfund Sites



IMPORTANT INFORMATION FOR YOU CONCERNING

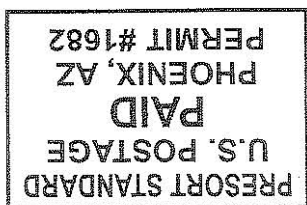
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