

Health Consultation

Exposure Investigation of Private Drinking Water Wells

**Motorola 52nd Street Superfund Site
Phoenix, Maricopa County, Arizona
CERCLIS No. AZD009004177**

Prepared by

Arizona Department of Health Services
Environmental Health Consultation Services
under cooperative agreement with the
Agency for Toxic Substances and Disease Registry

1.0 Purpose

The purpose of the consultation is to identify any current groundwater use in the Motorola 52nd Street Superfund Site area that might result in human exposure to site contaminants. The Arizona Department of Health Services previously evaluated well use in Operable Units 1 and 2 in 1992. This report updates the well use inventory for Operable Units 1 and 2 and provides an evaluation of potential groundwater exposure pathways in Operable Unit 3. This consultation is being conducted at the request of the U.S. Environmental Protection Agency Region 9.

2.0 Background

The Motorola 52nd Street Superfund Site is located in the central and eastern portions of Phoenix, Maricopa County, Arizona, in a mixed commercial and residential area. The site encompasses an area of groundwater contamination that extends from 52nd Street on the east to 7th Avenue on the west and is approximately bounded by McDowell Road on the north and Buckeye Road on the south (see Appendix). Groundwater was contaminated by historical spills or releases at the Motorola 52nd Street semiconductor manufacturing plant, the Honeywell (formerly Allied Signal) 34th Street aerospace manufacturing plant, and possibly other industrial companies in the area. Primary site contaminants include the industrial solvents trichloroethylene and trichloroethane (ADEQ 2001).

Private well users have been limited in number due to the availability of city of Phoenix municipal drinking water and Salt River Project irrigation water. Salt River Project irrigation water has been available to some areas west of the Motorola plant since the early 1900s. The city of Phoenix municipal drinking water system was developed concurrent with the onset of urban development in the 1950s and 1960s. This system has supplied water to the area east of 24th Street for more than 30 years. Historical uses of water from private wells included lawn and garden irrigation and swimming pool filling. Other uses might have included air-conditioning, evaporative cooling, and, in a few instances, household potable uses (Dames & Moore 1988).

In 1986, Dames & Moore Group, a division of URS Corporation, San Francisco, conducted a well inventory of an area downgradient from the Motorola 52nd Street plant. The approximate study area boundaries were Oak Street to the north, Washington Street to the south, 52nd Street to the east and 24th Street to the west. The inventory included a file and records review, followed by a physical search for private wells. Aerial photographs were used to identify older homes constructed before water and sewer were provided to the area. Owners of older homes were interviewed to determine if they had any knowledge of a well on the property. Twenty-eight well locations were identified, including 11 domestic wells. Of these, two wells were not found at reported locations, two were not equipped with pumps, one was paved over, one was plugged and unusable, one was covered with concrete, one was reported to be dry and not in use since 1981, and one had not been used since the early 1970s. Only one domestic well was reportedly being used to fill a swimming pool and for lawn irrigation. Two Salt River Project irrigation wells reportedly were used intermittently to supplement canal flows (Dames & Moore 1987).

In 1990, Dames & Moore updated the above survey. Methods were essentially the same as in the original survey, with no aerial records review. Locations were identified for 101 wells. These included monitoring and test wells, in addition to domestic and irrigation wells. The report notes that many wells had been abandoned, destroyed, or backfilled prior to completion. Seven domestic wells were identified. The same wells identified in the 1987 survey were reportedly in use, including one domestic well and two Salt River Project irrigation wells (Dames & Moore 1990).

In 1988, Kleinfelder, Inc., San Diego, California, conducted reconnaissance of wells in the East Washington Area. Study area boundaries were Thomas Road to the north, University Drive to the south, 48th Street to the east, and 7th Avenue to the west. Survey methods included a records review and field investigations, which were restricted to publicly available lands. In 1990, Kleinfelder produced a spreadsheet of well information for the East Washington Area (Kleinfelder 1990). In 1991, the engineering firm reportedly updated the spreadsheet, but this document was not located. In 1994, Roy F. Weston, Inc., updated the spreadsheet (Weston 1994).

3.0 Methods

The Arizona Department of Health Services researched various documents produced by agencies and consultants involved in site activities to obtain information about well use in all three operable units. These documents are listed below.

- Public Health Assessment for Motorola 52nd Street Facility (ATSDR 1988)
- Site Review and Update for Motorola, Inc., 52nd Street Plant (ATSDR 1993)
- Report on the Motorola, Inc., 52nd Street Plant (ERG 1996)
- Eastlake Park Site Inspection Report (ADHS 1985)
- Baseline Risk Assessment Motorola, Inc., 52nd Street Facility (ADHS 1992)
- Draft Remedial Investigation Motorola 52nd Street RI/FS Vol. III, Appendix F, Well Inventory (Dames & Moore 1987)
- Phase I Report East Washington Area (Kleinfelder 1989)
- ADEQ East Washington Area (K-3) Well Information (Kleinfelder 1990)
- Draft Well Inventory, Final Remedy Motorola, Inc., 52nd Street Facility (Dames & Moore 1990)
- Well Information Summary East Washington WQARF Project Area (Weston 1994)
- Arizona Department of Water Resources Well 55 Report (ADWR 2001)
- Arizona Department of Water Resources Groundwater Site Inventory (GWSI) Well Report (ADWR 2001)

In addition to the literature review, the Arizona Department of Health Services contacted agency personnel and others involved in site activities for additional well inventory information. These contacts included the U.S. Environmental Protection Agency Region 9 staff, the Motorola 52nd Street Superfund Site Community Advisory Group, the Arizona Department of Environmental Quality, the Arizona Department of Water

Resources, the city of Phoenix, Motorola, Honeywell, Hargis and Associates, and IT Corporation.

Wells located in the plume or in close proximity to the plume (Appendix) were selected from the foregoing documents based upon water use designations that were considered potential human exposure pathways. These use designations included: domestic; irrigation; public supply or municipal; recreation; commercial; industrial; air-conditioning; and industrial cooling. A list of these wells is contained in the Appendix. Of these wells, those that were listed as “abandoned,” “destroyed,” “paved over,” or otherwise noted in reports as unusable were eliminated from further evaluation. The remaining wells were selected to verify current status and to evaluate for exposure potential. Staff contacted well owners and conducted site visits when feasible to verify well status and details of water use, if any. A map was developed depicting approximate locations of investigated wells and their proximity to estimated plume boundaries (Appendix).

4.0 Results

The Motorola 52nd Street site has been divided into three operable unit areas for clean-up purposes. Since the focus of this investigation is the Operable Unit 3 study area of the site, well information is presented separately for that study area, and for the area encompassing Operable Units 1 and 2.

4.1 Operable Unit 3

The Operable Unit 3 study area boundaries are McDowell Road to the north, Buckeye Road to the south, 20th Street to the east, and 7th Avenue to the west. A total of 53 wells were identified in this area. Seven of these wells were listed as “abandoned,” one as “destroyed,” and one as “incomplete.” Forty-four remaining wells were identified in OU3 for further investigation, as listed in Table 4.1.

The Arizona Department of Health Services investigated the water use status of 44 wells in the Operable Unit 3 area. Two wells are currently being used for coolant water in closed-system air-conditioning units. Both of the closed coolant systems are encased in metal coils and the water is not exposed to outdoor or indoor air, preventing human exposure. Forty wells are no longer in use and the existence of two wells could not be verified.

Table 4.1 Wells Investigated in the OU3 Study Area

Well Location Number	Location	ADWR Registration #	Owner	Registered Well Use	Drill Date
A-1-3-3	Between McDowell and Van Buren, and 16 th St. and 24 th St.	55-629634	Private citizen	Irrigation	01/01/47
A-1-3-4	Between McDowell and Van Buren, and 7 th St. and 16 th St.	55-806267	Resolution Trust Corp. 2447 E. Camelback Phoenix, AZ 85016	n/a	12/31/50
A-1-3-4 BAB	Between McDowell Rd. and Willeta St., and 10 th St. and 12 th St.	n/a	Salt River Project	n/a*	05/ /62
A-1-3-4 CCD	9 th St. and Polk St.	55-806956	City of Phoenix 200 W. Washington Phoenix, AZ 85003 Verde Park	n/a *	n/a
A-1-3-5 ABD	1314 N. 3 rd St. Phoenix, AZ 85004	55-801418	Wessex Co. 1314 N. 3 rd St. Phoenix, AZ 85004 (Sundown Properties)	Domestic*	02/08/59
A-1-3-5 ACC	1101 N. Central Ave. Phoenix, AZ 85004	n/a	KPNX-TV 1101 N. Central Ave. Phoenix, AZ 85004	Industrial Cooling	n/a
A-1-3-5 BAA	1418 N. Central Ave. Phoenix, AZ 85004	n/a	Spaghetti Restaurant 1418 N. Central Ave. Phoenix, AZ 85004	n/a*	02/08/59
A-1-3-5 CDA	230 N. 1 st Ave. Phoenix, AZ 85003	n/a	U.S. Post Office 230 N. 1 st Ave. Phoenix, AZ 85003	Industrial Cooling	n/a
A-1-3-5 CA	Between Roosevelt and Fillmore, and 4 th Ave. and Central	55-639956	University Associate 4502 Main St. Scottsdale, AZ 85251	Domestic	n/a
A-1-3-5 CAD	618 N. Central Ave.	55-621530	Westward Ho Assoc. 1 Hospital TRT #2401 Providence, RI 02903	Domestic*	/ /45
A-1-3-5 CDD	350 N. 1 st Ave. Phoenix, AZ 85003	55-640210	Young Men's Assoc. 350 N. 1 st Ave. Phoenix, AZ 85003	Domestic*	11/29/55

Well Location Number	Location	ADWR Registration #	Owner	Well Use	Drill Date
A-1-3-5 DCC	15 E. Monroe St.	55-801052	Heller Co. 4425 N. 24 th St. #250 Phoenix, AZ 85016 (Valley National Bank)	Domestic	n/a
A-1-3-8 AAC	525 E. Washington St. Phoenix, AZ	55-513317	City of Phoenix 525 E. Washington Phoenix, AZ (Greyhound Bus Lines)	Industrial*	08/08/86
A-1-3-8 ABB	Between Van Buren and Adams sts. and Central Ave. and 2 nd St.	55-610165	Downtown Phoenix Limited Partnership 15 E. Monroe Phoenix, AZ 85003	Industrial, Air-Conditioning	08/ /30
A-1-3-8 ABB	Between Van Buren and Adams sts. and Central Ave. and 2 nd St.	55-610166	Downtown Phoenix Limited Partnership 15 E. Monroe Phoenix, AZ 85003	Industrial, Air-Conditioning	06/12/50
A-1-3-8 ABC	Between Adams and Jefferson sts., and Central Ave. and 2 nd St.	35-	Private citizen	Other	01/25/57
A-1-3-8 ABC	Between Adams and Jefferson sts., and Central Ave. and 2 nd St.	35-	Private citizen	Air-Conditioning	02/29/39
A-1-3-8 BAA	Central Ave. and Monroe St.	55-624386	Biltmore Holdings (San Carlos Hotel)	Air-Conditioning	01/01/50
A-1-3-8 BAA	Between Van Buren and Adams, and Central and 2 nd Ave.	55-626519	City of Phoenix 324 W. Adams Phoenix, AZ 85004	Public Supply	01/01/73
A-1-3-8 BAA	111 W. Monroe #1600 Phoenix, AZ 85003	55-608461	Goodrich Properties 111 W. Monroe #1600 Phoenix, AZ 85003	Not listed	n/a
A-1-3-8 BAA	111 W. Monroe St. Phoenix, AZ 85003	55-623511	Private Trust 111 W. Monroe Phoenix, AZ 85003	Industrial*	05/ /65
A-1-3-8 BAA	111 W. Monroe St. Phoenix, AZ 85003	55-623511	Private Trust 111 W. Monroe Phoenix, AZ 85003	Industrial*	05/ /43
A-1-3-8 BAA	111 W. Monroe St. Phoenix, AZ 85003	55-623510	Private Trust 111 W. Monroe Phoenix, AZ 85003	Industrial*	/ /63
A-1-3-8 BAA	111 W. Monroe St. Phoenix, AZ 85003	55-623510	Private Trust 111 W. Monroe Phoenix, AZ 85003	Industrial*	/ /64

Well Location Number	Location	ADWR Registration #	Owner	Well Use	Drill Date
A-1-3-8 BAA	234 N. Central #623 Phoenix, AZ 85004	55-624810	Security Center Co. 234 N. Central #623 Phoenix, AZ 85004	Domestic, Air-Conditioning	05/29/46
A-1-3-8 BAD	100 W. Washington St.	55-624386	Wells Fargo Plaza 100 W. Washington Phoenix, AZ (First Interstate Bank)	Industrial*	01/01/30
A-1-3-8 BAD	Between Monroe and Jefferson sts., and 2 nd and Central aves.	55-806796	Maricopa Co. BRD 401 W. Jefferson St. Phoenix, AZ 85003	No Use	n/a
A-1-3-8 BAD	Between Monroe and Jefferson sts., and 2 nd and Central aves.	55-806797	Maricopa Co. BRD 401 W. Jefferson St. Phoenix, AZ 85003	No Use	n/a
A-1-3-8 BBC	620 W. Washington Phoenix, AZ 85003	35-	City of Phoenix (Police Building) 620 W. Washington Phoenix, AZ 85003	Public Supply	11/ /73
A-1-3-8 BBC	Between Monroe and Jefferson, and 5 th and 7 th aves.	35-024634	City of Phoenix 251 W. Washington Phoenix, AZ 85003	Public Supply	12/ /73
A-1-3-8 BBD	Between Adams and Jefferson sts. and 3 rd and 5 th aves.	55-807316	City of Phoenix 200 W. Washington Phoenix, AZ 85003	No Use	n/a
A-1-3-8 BBD	Between Adams and Jefferson sts., and 3 rd and 5 th aves.	55-807317	City of Phoenix 200 W. Washington Phoenix, AZ 85003	No Use	n/a
A-1-3-8	Between Van Buren and Buckeye Rd., and 7 th Ave. and 7 th St.	35-	Trans America Title	Industrial	03/17/59
A-1-3-8 BDA	1 st Ave. and Washington	n/a	Jefferson Square Ltd. 132 S. Central Ave. Phoenix, AZ 85003 (Old Courthouse)	Commercial	n/a
A-1-3-8 BDA	1 st Ave. and Washington	55-629587	Jefferson Square Ltd. 132 S. Central Ave. Phoenix, AZ 85003 (Old Courthouse)	Air-Conditioning	04/03/63
A-1-3-8 DBD	125 E. Lincoln Phoenix, AZ 85004	55-801051	Phoenix Elementary School District 125 E. Lincoln Phoenix, AZ 85004	Irrigation, Air-Conditioning	/77

Well Location Number	Location	ADWR Registration #	Owner	Well Use	Drill Date
A-1-3-9 ADA	16 th St. and Jefferson	55-626529	City of Phoenix Parks and Recreation (Eastlake Park)	Irrigation	03/ /47
A-1-3-9 BDD	12 th St. and Lincoln St.	55-606389	City of Phoenix 251 W. Washington Phoenix, AZ 85003 (G. Heileman Brewing)	Industrial*	/ /47
A-1-3-17 BBA	1239 S. 5 th Ave.	55-626532	City of Phoenix Parks and Recreation Harmon Park 1239 S. 5 th Ave.	Recreation, Irrigation	05/18/57
A-2-3-33 DCC	12 th St. and Coronado	55-626528	City of Phoenix Parks and Recreation (Coronado Park)	Recreation, Irrigation	12/12/55
A-2-3-33 DDC	1111 E. McDowell Rd. Phoenix, AZ 85006	35-	Good Samaritan Hospital 1111 E. McDowell Rd. Phoenix, AZ 85006	Commercial	08/26/57
A-1-3-4 BAB	1111 E. McDowell Rd. Phoenix, AZ 85006	n/a	Good Samaritan Hospital 1111 E. McDowell Rd. Phoenix, AZ 85006	n/a	05/16/69
A-1-3-4 BAC	1111 E. McDowell Rd. Phoenix, AZ 85006	35-	Good Samaritan Hospital 1111 E. McDowell Rd. Phoenix, AZ 85006	N/a	11/04/72
A-1-3-4 BAC	1111 E. McDowell Rd. Phoenix, AZ 85006	35-	Good Samaritan Hospital 1111 E. McDowell Rd. Phoenix, AZ 85006	n/a	11/18/72

n/a—not available

* not in use

4.1.1 Wells in Use

Security Center Co.

The Operations and Maintenance Supervisor reported that the well water is currently being used in the building's closed-system cooling loop. The system is engineered such that no human exposure occurs to the water. The drinking water in the building is supplied by the city of Phoenix. The Operations and Maintenance Supervisor reported that the city would be supplying cooling water to the facility in the near future, and the well would likely be capped at that time.

Phoenix Elementary School District

ADHS staff visited the site at 125 East Lincoln Street and met with the maintenance supervisor. He reported that the well is currently in use in a closed condenser cooling system. The system is engineered such that no human exposure occurs to the water. The water had formerly been used for irrigation, but irrigation use ceased in 1996 when the grounds were converted to desert landscaping. The facility is moving, and the well will be capped during 2001.

4.1.2 Wells Not in Use

City of Phoenix Verde Park

The well is located in Verde Park at 9th St. and Polk St. This area was formerly the primary city of Phoenix well field, which contained several wells that served as the city water supply around the turn of the century. City records indicate that these wells were relegated to back-up use in 1922 when a pipeline to the Verde River was completed. Use of the wells stopped completely in 1936. Water lines from the wells were demolished at that time. City of Phoenix (COP) Office of Environmental Programs staff reported that some wells were uncovered during Verde Park construction in 1994. The wells have since been either capped or abandoned.

City of Phoenix Police Building

The site is located at 620 West Washington St. COP staff reported that the well was originally used in the facility's closed cooling system. This use was stopped when the cooling system was upgraded. The well might have been designated as an emergency public water supply for use in the event of a major water line break. COP staff were not aware of any use of the well for this purpose. The city capped the well with a steel plate and disconnected the discharge pipe approximately 3–4 years ago and is planning to grout and abandon the well.

City of Phoenix (Former Greyhound Bus Lines Well)

A COP staff member reported that the city acquired the property at 525 East Washington St. about 1997–98, but he had no knowledge of a production well on the property. A Phase I assessment completed at that time did not contain information on a well. This well is listed as industrial use in previous surveys, but apparently no longer exists (Kleinfelder 1990; Weston 1994).

City of Phoenix Eastlake Park Well

ADHS staff visited the site at 16th Street and Jefferson Street and verified that this former park grounds irrigation well is no longer in use. Currently plugged, the well has not been operated since 1994 when all COP park wells were taken out of service.

City of Phoenix Parks and Recreation—Coronado Park

ADHS and COP staff visited the site at 12th Street and Coronado and examined the well. The well was not in use. COP staff reported that the well had not been used in several years and they knew of no plans for its use. This well was taken out of use by 1994 when

COP stopped using park wells. The well had been used to irrigate park grounds and to fill the swimming pool.

City of Phoenix Parks and Recreation—Harmon Park

ADHS and COP staff visited the site at 1239 South 5th Ave. and examined the well, which was not in use; the discharge pipe had been disconnected. COP staff reported the well had not been used in several years and they knew of no plans for its use. Formerly used to irrigate park grounds and to fill the swimming pool, the well was taken out of use by 1994 when COP stopped using park wells.

City of Phoenix Fire Operations Center (G. Heileman Brewing)

This site, located at 150 South 12th St., was previously owned by G. Heileman Brewing, and before that by Carling Brewery. COP staff reported the well had been capped and was located under either a parking lot or a landscaped area. The well reportedly supplied brewery process water until 1980, when excess sand in the well water forced the brewery to convert to the city of Phoenix municipal system.

City of Phoenix (55-626519)

The well location number indicates this well had been located between Van Buren and Adams streets and Central and 2nd avenues. COP staff have no information on a city of Phoenix well in this area. The well's existence was not verified in previous well surveys reviewed and so it appears to no longer exist.

City of Phoenix (35-024634)

The well location number indicates this well had been located between Monroe and Jefferson streets, and 5th and 7th avenues. City staff have no information on a city of Phoenix well in this area and the well's existence was not verified in previous well surveys reviewed. Therefore, it appears the well no longer exists.

City of Phoenix 55-807316 and 55-807317

The well location numbers for these wells indicate they had been located between Adams and Jefferson streets and 3rd and 5th avenues. City staff have no information on any city of Phoenix well in this area. The existence of these wells was not verified in previous well surveys reviewed and they appear to no longer exist.

Jefferson Square Limited (Old Courthouse North and South Wells)

ADHS staff visited the site, at 1st Avenue and Washington Street, which houses Maricopa County Superior Court in a building currently managed by Maricopa County. The county operations and maintenance staff reported the wells are no longer in use. Water from the wells had formerly been used as a coolant in a sealed air-conditioning system.

Wessex Co. (Sundown Properties)

ADHS staff visited the site at 1314 North 3rd St., which is the Cable One Building, managed by the Wessex Company. The registered well owner is Sundown Properties. No one on-site had knowledge of the well. A Wessex Company representative reported that

company staff had no records or knowledge of any production well on the property, and that only city of Phoenix municipal water was used in the building.

KPNX TV

Staff attempted to visit the site at 1101 North Central Ave. but could not gain access. The maintenance supervisor reported that the well, which had been used to supply water for a closed condenser cooling system, had been abandoned several years ago when it began producing sand.

Spaghetti Restaurant

ADHS staff visited the site at 1418 North Central Ave. and examined the well, accompanied by the general manager. The well and pump were located outside of the northwest corner of the building in a fenced area. The pump was disconnected and the general manager reported that it had not been used in at least 8 years. No historical information on well use was located.

U.S Post Office

ADHS staff spoke with the maintenance supervisor at 230 North 1st Ave., who reported that the well was capped and had been paved over when a parking lot was constructed. The well had been used to supply water for a closed condenser cooling system.

Westward Ho Association

Accompanied by the maintenance supervisor, ADHS staff examined the well at 230 North 1st Ave. The pump was disconnected, and the maintenance supervisor reported the well had not been used in at least 16 years. No information on historical use of the well was located. The well was registered for domestic use and water rights were sold approximately 10 years ago. The former hotel building is currently an elderly housing facility.

Young Men's Christian Association (YMCA)

ADHS staff visited the site at 350 North 1st Ave., but current YMCA staff had no knowledge of the well. A former maintenance supervisor reported that the well had not been used since at least 1988, and the pump had been disconnected. He believed that the well, registered for domestic use, had been used to supply a closed loop cooling system.

Heller Company (Valley National Bank)

Occupants at 15 East Monroe St. had no information on the well. Staff of the Heller Company, which currently owns the building, reported the well was not in use and only municipal water was used in the building. Maintenance staff reported the well had been used in a closed loop condenser cooling system, and its use had ceased around 1990.

Biltmore Holdings (San Carlos Hotel)

With the site chief engineer, ADHS staff examined the well at Central Avenue and Monroe. The well water had been used as a coolant in a sealed air conditioning system. Use of the well ceased approximately 2 years ago, due to the corrosive nature of the water. The well will be capped in the near future.

Goodrich Properties

ADHS staff visited the building at 111 West Monroe, which currently houses the State Bar Association. The site maintenance supervisor had no knowledge of the well and reported that only city of Phoenix municipal water was used in the building. An ADWR 2001 well inventory database indicated that the well was capped.

Private Trust (four wells)

ADHS staff visited the building at 111 West Monroe, which currently houses the State Bar Association. The site maintenance supervisor had no knowledge of the well and reported that only city of Phoenix municipal water was used in the building. The wells, registered for industrial use, were listed as not in use in previous surveys reviewed (Kleinfelder 1990; Weston 1994).

Wells Fargo Plaza (former First Interstate Bank)

At 100 West Washington St., ADHS staff spoke with the maintenance supervisor, who reported the well was not in use and water rights were sold in 1997. The well, registered for industrial use, was listed as not in use in a 1990 survey (Kleinfelder 1990). A 1994 survey noted that the well was incomplete (Weston 1994).

Good Samaritan Hospital (four wells)

A facility maintenance worker reported the wells had been capped and sealed before 1979. Used for the facility's sealed condenser cooling system, the wells had been available as an emergency back-up system for the hospital's potable water system.

Private citizen (55-629634)

The well location number indicates that this well, which was registered for irrigation use, had been located between McDowell Road and Van Buren Street, and 16th and 24th streets. Because ADHS staff were unable to reach the well owner to obtain information on the well, field investigations failed to locate it, and the existence of the well was not verified in previous surveys reviewed, it appears that this well is no longer in use.

Resolution Trust Corporation

The well location number indicates a location between McDowell Road and Van Buren Street, and 7th and 16th streets, but it appears the well is no longer in use. Staff were unable to contact the listed well owner, field investigations failed to locate the well, and its existence was not verified in previous surveys reviewed.

Salt River Project (unregistered)

The well location number indicates a location between McDowell Road and Willetta Street, and 10th and 12th streets, but Salt River Project Canal Operations staff reported there were no Salt River Project wells in this area. Previous well inventories indicated the well existence was verified, although no address was listed in the survey reports. The surveys listed the well as not in use (Kleinfelder 1990; Weston 1994). Therefore, it appears that this well is no longer in use.

University Associate

Although the well location number indicates a location between Roosevelt and Fillmore streets, and 4th and Central avenues, staff could not locate the well or contact the listed owner to verify its existence. The well was registered for domestic use, but it appears that it is no longer in use; its existence was not verified in previous surveys reviewed.

Private citizen (two wells)

The well location numbers indicate a location between Adams and Jefferson streets, and Central Avenue and 2nd Street, however, the wells, whose existence was not verified in previous well inventories reviewed, could not be located and no contact information was available for the listed owner. Therefore, it appears that these wells are no longer in use.

Trans America Title

The well location number indicates a location between Van Buren Street and Buckeye Road, and 7th Avenue and 7th Street. Nevertheless, the well could not be located and no contact information was available for the listed owner. Also, the existence of the well was not verified in previous surveys reviewed. It appears that this well is no longer in use.

Maricopa County BRD (two wells)

The well location number indicates a location between Monroe and Jefferson streets and 2nd and Central avenues, but the wells could not be located. They were listed in the Arizona Department of Water Resources Wells 55 Report, but no drill date, casing measurements, depth of well, or water level were listed. Because the wells were not listed in previous well surveys reviewed, they might never have been drilled, as a listing in the Wells 55 Report only indicates an intention to drill.

4.1.3 Unverified OU 3Wells

Downtown Phoenix Limited Partnership (two wells)

The well location number for these wells indicates a location between Van Buren and Adams streets, and Central Avenue and 2nd Street. ADHS staff could not locate the wells, and representatives of the Downtown Phoenix Limited Partnership did not respond to multiple inquiries. Existence of the wells had been verified in previous surveys, and well use was listed as air-conditioning. This area of downtown Phoenix is highly developed with parking garages and large commercial buildings. Both wells were drilled prior to the 1950s, and are listed as being used as an air-conditioning coolant. It is very unlikely that either of these two wells is still in use.

4.2 Operable Units 1 and 2

Twenty-one wells were identified for investigation in the Operable Units 1 and 2 areas. Seven wells were designated in previous well inventories as abandoned, destroyed, plugged, or otherwise unusable. Fourteen remaining wells were investigated (Table 4.2). It appears that 12 wells are no longer in use. The use status of two private wells could not be determined, but these wells are registered to the same private citizen who is aware of the groundwater contamination.

Table 4.2 Wells Investigated in the OU1 and OU2 Areas

Well Location Number	Location	ADWR Registration #	Owner	Registered Well Use	Drill Date
A-1-3-1 BAB	Between McDowell Rd. and Moreland St., and 32 nd and 36 th sts.	35-	Private citizen	Domestic	11/14/57
A-1-3-1 DDD	40 th St. and Van Buren St.	55-608430	Salt River Project (18E-5N) 40 th and Van Buren sts.	Irrigation, Utility	08/29/25
A-1-3-11 BAB	27 th and Monroe sts.	n/a	The Salvation Army 2707 E. Van Buren St. Phoenix, AZ 85008 (Desert Hills)	Unused	n/a
A-1-3-12	Between Van Buren St. and Henshaw Rd and 32 nd and 40 th sts.	55-808132	Unknown	Irrigation	08/29/25
A-1-3-12 ADD1	40 th St. and the SPRR tracks	55-639522	Private citizen	Domestic	07/08/42
A-1-3-12 ADD2	40 th St. and the SPRR tracks	55-639522	Private citizen	Domestic	07/08/42
A-1-3-12 CAB	111 S. 34 th St. Phoenix, AZ 85034	55-802382	Garrett Turbine Engines 111 S. 34 th St. Phoenix, AZ 85034	Industrial	01/01/52
A-1-4-5 CBB	801 N. 48 th St. Phoenix, AZ 85008	55-640413	Private citizen	Domestic, Irrigation	01/01/50
A-1-4-5 CBA	Between 48 th and 50 th sts., and Polk St. and Roosevelt	55-606555	Private citizen	Domestic, Irrigation	01/01/76

Well Location Number	Location	ADWR Registration #	Owner	Well Use	Drill Date
A-1-4-6 AB	4441 E. McDowell Rd. Phoenix, AZ 85008	55-628943	Anderson-Nelson Engineering Co. 4441 E. McDowell Rd. Phoenix, AZ 85008	Irrigation	n/a
A-1-4-6 ABA	1502 N. 46 th St.	55-801593	Private citizen	Domestic*	01/01/48
A-1-4-6 ACC	1042 N. 46 th St. Phoenix, AZ 85008	n/a	Private citizen	Irrigation*	10/23/57
A-2-4-31 DDD	4626 E. Granada Rd. Phoenix, AZ 85008	55-650584	Private citizen	Irrigation, Domestic	n/a
A-2-4-31 DDD	4626 E. Granada Rd. Phoenix, AZ 85008	55-553400	Private citizen	Irrigation, Domestic	02/03/96

Private citizen (two wells)(55-553400, 55-650584)

ADHS staff were unable to reach the owner to determine the status of these wells.

Reports indicate the original well dried up. The well water reportedly was used to fill a swimming pool and for grounds irrigation. The water reportedly was also used for indoor domestic purposes for a 6-month period in the late 1980s. Use of the well was evaluated for exposure potential and health risk in the 1992 Baseline Risk Assessment. The owner was informed of the contamination and potential risks at that time.

SRP Well 18E-5N (55-608430)

ADHS staff contacted staff from Salt River Project (SRP) Canal Operations, who reported the well had not been used since 1999 under an agreement with the Arizona Department of Environmental Quality. Use of the well could potentially adversely impact groundwater flow. The well was available for use in the event of an emergency, during drought conditions, or if water currently supplied by Motorola became unavailable. SRP staff reported that all SRP irrigation wells are monitored for contamination, and if maximum contaminant levels are exceeded the wells are taken out of service.

Another Salt River Project well (16.9E-6N), located west of 32nd Street adjacent to the Grand Canal, has been taken out of use as a part of the agreement with the Arizona Department of Environmental Quality. This well was included in previous surveys, but is not located in close proximity to current plume boundaries.

The Salvation Army (Desert Hills)

ADHS staff examined the well, at 27th Street and Monroe, accompanied by the Salvation Army maintenance supervisor. He reported the well had not been used since at least 1990, and there were no plans to use the well. The well was not equipped with a pump.

Previous well surveys reviewed indicated that the well had not been used since at least 1987.

Unknown Well (55-808132)

Arizona Department of Water Resources (ADWR) staff stated that records do not contain enough information to locate this well. Registered for irrigation use, the well was listed in the Arizona Department of Water Resources Wells 55 Report, but was not included in previous well surveys reviewed. This well was not located by any of the previous investigations.

Private citizen (two wells) (55-639522)

ADHS staff were unable to gain access to the property, on the northwest corner of 40th Street and the Southern Pacific railroad tracks. There did not appear to be functioning wells on the property. Staff mailed a letter to the owner requesting information on the wells, and did not receive a response. In 1986, Dames & Moore visited the site and examined the wells, which were not being used and were not equipped with pumps (Dames & Moore 1987).

Garrett Turbine Co. (55-802382)

The site is located on what is now Honeywell property. In 1983 or 1984, this industrial use well reportedly was sealed with cement (Dames & Moore 1987). Hargis and Associates staff reported that in 1969 three water production wells on the Garrett Turbine property were abandoned. The wells had been used for industrial cooling. Hargis and Associates staff reported that currently there are only monitoring wells on Honeywell grounds.

Private citizen (55-640413)

This well, located at 801 North 48th St, was reportedly plugged and unusable in 1987 (Dames & Moore 1987). The site is located on what is now Arizona Highway 202.

Another well (#55-640383), located at 48th Street and Van Buren, is registered to the well owner above. Now used in the Motorola monitoring program, the well was drilled in the early 1900s and at one time was used for domestic water supply (Dames & Moore 1987).

Private citizen (55-606555)

ADHS attempted to visit the site, but no residence or business, or evidence of a well, was found at this location. An attempt to locate this well during the remedial investigation was also unsuccessful. The 1987 well survey report noted the registered location would have placed the well on the football field at East High, which was in place at the time of the survey. No well was found on the football field. The report also noted that the reported water level was more than 100 feet deeper than measured water levels for the area. The investigators concluded that the well was probably inaccurately located (Dames & Moore 1987).

Anderson-Nelson Engineering (Three-O)

At 4441 East McDowell Road, ADHS staff examined the well, which is located in the gardening equipment shed. The well was not in use and the piping was disconnected. The company vice president stated the well had not been used since at least 1976, and a previous survey cited reports the well had not been used since the 1950s. Reportedly, the well had been used to irrigate citrus groves (Dames & Moore 1987).

Private citizen (55-801593)

Located at 1502 North 46th Street, this well reportedly was used as a domestic water source for about 20 years, from 1948 to the late 1960s or early 1970s. Reportedly, the well supplied water to an apartment complex, a daycare center, and a pool (ERG 1996). From 1984 to 1986, the well was sampled as a part of the Motorola monitoring program and volatile organic chemical contamination was detected. In 1986, a locked steel housing was installed to protect the well and prevent its use. Motorola has controlled access to the well since the installation of the housing and lock (ADHS 1992).

Private citizen (A-1-4-6 ACC)

Also part of the Motorola monitoring program, the well located in the Lone Palm Trailer Court at 1042 North 46th Street reportedly was used for irrigation until 1959 or 1960 and was abandoned in June 1990 for freeway construction, Motorola staff reported.

Private citizen (A-1-3-1 BAB)

The well location number indicates this well was located between McDowell Road and Moreland Street, and 32nd and 36th streets, but the well could not be located given available location information and with no contact information for the listed owner. The well was not found in previous well inventories reviewed and, therefore, appears to no longer be in use.

5.0 Community Outreach

ADHS staff participated in Community Advisory Group (CAG) meetings on May 10, 2001, July 19, 2001, September 20, 2001, and February 6, 2002. At the September 20, 2001, CAG meeting, ADHS staff discussed the well inventory and preliminary results with attendees. Considerable interest was expressed by the CAG about potential exposures of community members to contaminated well water. ADHS staff requested that attendees provide information on any private wells in the area and provide ADHS with contact information for community members who might have knowledge of the private wells. Attendees did not identify any additional wells.

6.0 ATSDR=s Child Health Initiative

ATSDR=s child health initiative recognizes the unique vulnerabilities of children exposed to environmental chemicals. Children have greater opportunities for exposure, increased potential for health problems, and less ability to avoid hazards than adults. Children are more likely to be sensitive to the effects of chemicals due to their developing physiology and their low body weight. Pound for pound of body weight,

children drink more water, eat more food, and breathe more air than adults. The purpose of this consultation is to identify pathways of human exposure to groundwater, and particular attention was given to investigating wells whose use might result in the exposures of children, such as domestic and irrigation wells. No children were found to be exposed to site contaminants through use of domestic or irrigation water.

7.0 Conclusion

The Arizona Department of Health Services examined the current water use status of all documented wells in the Motorola 52nd Street Superfund Site. Exposure to groundwater presents **no apparent public health hazard** due to the absence of currently complete exposure pathways. However, unregistered private wells might exist within the Motorola 52nd Street Superfund Site

8.0 Recommendations

No recommendations are needed at this time.

9.0 Public Health Action Plan

Although no recommendations are needed at this time, ADHS will conduct the following activities designed to identify and evaluate any additional unregistered private wells within the site.

- The Arizona Department of Health Services will continue efforts to obtain information on unregistered wells by interviewing attendees at Community Advisory Group meetings, as well as other community members who might have knowledge of private well use in the area.
- The Arizona Department of Health Services will investigate well status to determine the potential for human exposure if additional private wells are identified in the plume area.

References

- Agency for Toxic Substances and Disease Registry. Public health assessment for Motorola 52nd Street Facility, Phoenix, Arizona. Atlanta: US Department of Health and Human Services; 1988 May.
- Agency for Toxic Substances and Disease Registry. Site review and update, Motorola Inc. (52nd Street Plant), Phoenix, Maricopa County, Arizona. Atlanta: US Department of Health and Human Services; 1993 Oct.
- Arizona Department of Environmental Quality. Environmental bulletin, Motorola 52nd Street Superfund Site. Phoenix: Arizona Department of Environmental Quality; 2001 Jan.
- Arizona Department of Health Services. Eastlake Park site inspection report. Phoenix: Arizona Department of Health Services; 1985 Aug.
- Arizona Department of Health Services. Baseline risk assessment; Motorola Inc. 52nd Street Facility, Phoenix, Arizona. Phoenix: Arizona Department of Health Services; 1992 Nov.
- Arizona Department of Water Resources. a. Arizona Department of Water Resources wells 55 report. Phoenix: Arizona Department of Water Resources; 2001 Jul.
- Arizona Department of Water Resources. b. Arizona Department of Water Resources groundwater site inventory (GWSI) well report. Phoenix: Arizona Department of Water Resources; 2001 Sep.
- Dames & Moore Group. Remedial investigation, Motorola 52nd Street RI/FS (draft), volume III of IV, appendix F. San Francisco: Dames & Moore Group, a division of URS Corporation; 1987 Jun.
- Dames & Moore Group. Draft remedial action plan, Motorola 52nd Street Facility, Phoenix, Arizona, job no. 09448-012-33. San Francisco: Dames & Moore Group, a division of URS Corporation; 1988 Jun.
- Dames & Moore Group. Draft well inventory, final remedy RI/FS, Motorola 52nd Street Facility. San Francisco: Dames & Moore Group, a division of URS Corporation; 1990 Nov.
- Eastern Research Group Inc. Report on the Motorola Inc. (52nd Street Plant), Phoenix, Maricopa County, Arizona. Chantilly, Virginia: Eastern Research Group Inc.; 1996 Mar.
- Kleinfelder Inc. Phase I report, task assignment K-3, East Washington Area, Phoenix, Arizona. San Diego, California: Kleinfelder Inc. August 1989.

Kleinfelder Inc. ADEQ East Washington Area (K-3) well information. San Diego, California: Kleinfelder Inc.; 1990 Sep.

Roy F. Weston Inc. Well information summary report, East Washington WQARF project area, task assignment RW-13. West Chester, Pennsylvania: Roy F. Weston Inc.; 1994 Dec.

Preparers of Report

Arizona Department of Health Services, Office of Environmental Health

Amy Welch, Environmental Health Specialist

Will Humble, Chief, Office of Environmental Health, Principal Investigator

ATSDR Technical Project Officer

Gail Godfrey

Division of Health Assessment and Consultation

Superfund Site Assessment Branch

State Programs Section

ATSDR Regional Representative

William Nelson

Office of Regional Operations, Region IX

Office of the Assistant Administrator

Appendix

1. Map showing approximate locations of investigated wells and estimated 4th Quarter 1997 plume outlines.
2. Table listing all wells identified in plume vicinity.

All Wells Identified in Plume Area

Well Location Number	Location	ADWR Registration #	Owner	Well Use	Drill Date
			OU2		
A-1-3-1 ADA	Between 36 th and 40 th sts., vicinity of 202 freeway	55-801658	Arizona State Land Dept. 1616 W. Adams	No longer exists (D&M 1987)	/ /51
A-1-3-1 ADA	Between 36 th and 40 th sts., vicinity of 202 freeway	55-801656	Arizona State Land Dept. 1616 W. Adams	Capped* (Motorola 2002)	/ /51
A-1-3-1 BAB	Between McDowell Rd. and Moreland St., and 32 nd and 36 th sts.	35-	Private citizen	Domestic Not found (D&M 1987)	11/14/57
A-1-3-1 DDD	40 th St. and Van Buren	55-608430	Salt River Project (18E-5N) 40 th St. and Van Buren	Irrigation, Utility	08/29/25
A-1-3-2 DCA	Between Van Buren and Fillmore sts., and 26 th and 30 th sts.	n/a	Peoples Oil and Gas Co.	Destroyed (D&M 1987)	02/ /45
			OU3		
A-1-3-3	Between McDowell and Van Buren, and 16 th and 24 th sts.	55-629634	Private citizen	Irrigation	01/01/47
A-1-3-4	Between McDowell and Van Buren, and 7 th and 16 th sts.	55-806267	Resolution Trust Corp. 2447 E. Camelback Phoenix, AZ 85016	n/a	12/31/50
A-1-3-4 BAB	Between McDowell Rd. and Willeta St., and 10 th and 12 th sts.	n/a	Salt River Project	n/a*	05/ /62
A-1-3-4 BAB	1111 E. McDowell Rd. Phoenix, AZ 85006	n/a	Good Samaritan Hospital 1111 E. McDowell Rd. Phoenix, AZ 85006	n/a	05/16/69
A-1-3 BAC	1111 E. McDowell Rd. Phoenix, AZ 85006	35-	Good Samaritan Hospital 1111 E. McDowell Rd. Phoenix, AZ 85006	n/a	11/04/72

Well Location Number	Location	ADWR Registration #	Owner	Well Use	Drill Date
A-1-3 BAC	1111 E. McDowell Rd. Phoenix, AZ 85006	35-	Good Samaritan Hospital 1111 E. McDowell Rd. Phoenix, AZ 85006	n/a	11/18/72
A-1-3-4 CCD	9 th and Polk sts.	55-806956	City of Phoenix 200 W. Washington Phoenix, AZ 85003 (Verde Park)	n/a *	n/a
A-1-3-5 ABD	1314 N. 3 rd St. Phoenix, AZ 85004	55-801418	Wessex Co. 1314 N. 3 rd St. #212 Phoenix, AZ 85004 (Sundown Properties)	Domestic*	02/08/59
A-1-3-5 ACB	Between Van Buren and Taylor sts., and Central Ave. and 2 nd St.	55-806851	City of Phoenix 125 E. Washington St. Phoenix, AZ 85004	n/a** Abandoned (Weston 1994)	n/a
A-1-3-5 ACC	1101 N. Central Ave Phoenix, AZ 85004	n/a	KPNX-TV 1101 N. Central Ave. Phoenix, AZ 85004	Industrial Cooling	n/a
A-1-3-5 BAA	1418 N. Central Ave. Phoenix, AZ 85004	n/a	Spaghetti Restaurant 1418 N. Central Ave. Phoenix, AZ 85004	n/a*	02/08/59
A-1-3-5 CA	Between Roosevelt and Fillmore, and 4 th Ave. and Central	55-639956	University Associate 7502 Main St. Scottsdale, AZ 85251	Domestic	n/a
A-1-3-5 CAD	618 N. Central Ave.	55-621530	Westward Ho Assocs. 1 Hospital TRT #2401 Providence, RI 02903	Domestic*	/ /45
A-1-3-5 CDA	230 N. 1 st Ave. Phoenix, AZ 85025	n/a	U.S. Post Office 230 N. 1 st Ave. Phoenix, AZ 85025	Industrial Cooling	n/a
A 1-3-5 CDC	Between Fillmore St. and Van Buren St., and 1 st and 4 th aves.	55-806829	Salt River Project P.O. Box 52075 Phoenix, AZ 85072	Industrial** Abandoned (Weston '94)	n/a
A-1-3-5 CDD	350 N. 1 st Ave. Phoenix, AZ 85003	55-640210	YMCA 350 N. 1 st Ave. Phoenix, AZ 85003	Domestic*	11/29/55

Well Location Number	Location	ADWR Registration #	Owner	Well Use	Drill Date
A-1-3-5 DCC	15 E. Monroe St.	55-801052	Heller Co. 4425 N. 24 th St. Phoenix, AZ 85016 (Valley National Bank)	Domestic	n/a
A-1-3-5 DCD	120 E. Van Buren St. Phoenix, AZ 85004	55-629280	Phoenix Newspapers 120 E. Van Buren St. Phoenix, AZ 85004	Industrial** Abandoned (Weston 1994)	01/01/48
A-1-3-8 AAC	525 E. Washington St. Phoenix, AZ	55-513317	City of Phoenix 525 E. Washington Phoenix, AZ (Greyhound Bus Lines)	Industrial*	08/08/86
A-1-3-8 ABB	Between Van Buren and Adams sts., and Central Ave. and 2 nd St.	55-610165	Downtown Phoenix Limited Partnership 15 E. Monroe Phoenix, AZ 85003	Industrial Air-conditioning	08/ /30
A-1-3-8 ABB	Between Van Buren and Adams sts., and Central Ave. and 2 nd St.	55-610165	Downtown Phoenix Limited Partnership 15 E. Monroe Phoenix, AZ 85003	Industrial Air-conditioning	08/ /30
A-1-3-8 ABC	Between Adams and Jefferson sts., and Central Ave. and 2 nd St.	35-	Private citizen	Other	01/25/57
A-1-3-8 ABC	Between Adams and Jefferson sts., and Central Ave. and 2 nd St.	35-	Private citizen	Air-conditioning	02/29/39
A-1-3-8 BAA	Central Ave. and Monroe St.	55-624386	Biltmore Holdings (San Carlos Hotel)	Air-conditioning*	01/01/50
A 1-3-8 BAC	Between Monroe and Jefferson sts., and 1 st and 4 th aves.	55-806956	City of Phoenix 251 W. Washington Phoenix, AZ 85003	Abandoned (Weston 1994)	n/a

Well Location Number	Location	ADWR Registration #	Owner	Well Use	Drill Date
A 1-3-8 BAC	Between Monroe and Jefferson sts., and 1 st and 4 th aves.	55-806956	City of Phoenix 251 W. Washington Phoenix, AZ 85003	No Use Abandoned (Weston 1994)	n/a
A-1-3-8 BAD	Between Adams and Jefferson sts., and 2 nd Ave. and Central	55-619308	Sunbelt Medical Assocs. 4440 N. 36 th St. #201 Phoenix, AZ 85018	Industrial* Incomplete well (Weston 1994)	01/01/30
A-1-3-8 BBC	620 W. Washington St. Phoenix, AZ 85003	35-	City of Phoenix Police Building 620 W. Washington Phoenix, AZ 85003	Public Supply	11/ /73
A-1-3-8 BBD	Between Adams and Jefferson sts., and 3 rd and 5 th aves.	35-024634	City of Phoenix 251 W. Washington Phoenix, AZ 85003	Public Supply	12/ /73
A-1-3-8 BBD	Between Adams and Jefferson sts., and 3 rd and 5 th aves.	55-807316	City of Phoenix 200 W. Washington Phoenix, AZ 85003	No Use	n/a
A-1-3-8 BBD	Between Adams and Jefferson sts., and 3 rd . and 5 th aves.	55-807317	City of Phoenix 200 W. Washington Phoenix, AZ 85003	No Use	n/a
A-1-3-8	Between Van Buren St. and Buckeye Rd., and 7 th Ave. and 7 th St.	35-	Trans America Title	Industrial	03/17/59
A-1-3-8 BAA	111 W. Monroe St. Phoenix, AZ 85003	55-623511	Private Trust 111 W. Monroe Phoenix, AZ 85003	Industrial*	05/ /65
A-1-3-8 BAA	111 W. Monroe St. Phoenix, AZ 85003	55-623511	Private Trust 111 W. Monroe Phoenix, AZ 85003	Industrial*	05/ /43
A-1-3-8 BAA	111 W. Monroe St. Phoenix, AZ 85003	55-623510	Private Trust 111 W. Monroe Phoenix, AZ 85003	Industrial*	/ /63

Well Location Number	Location	ADWR Registration #	Owner	Well Use	Drill Date
A-1-3-8 BAA	111 W. Monroe St. Phoenix, AZ 85003	55-623510	Private Trust 111 W. Monroe Phoenix, AZ 85003	Industrial*	/ /64
A-1-3-8 BAA	Between Van Buren and Adams sts., and Central and 2 nd aves.	55-626519	City of Phoenix 324 W. Adams Phoenix, AZ 85004	Public Supply	01/01/73
A-1-3-8 BAA	111 W. Monroe	55-608461	Goodrich Properties 111 W. Monroe #1600 Phoenix, AZ 85003	Not listed*	n/a
A-1-3-8 BAA	234 N. Central Phoenix, AZ 85004	55-624810	Security Center Co. 234 N. Central #623 Phoenix, AZ 85004	Domestic Air-conditioning	05/29/46
A-1-3-8 BAB	Between Van Buren and Adams sts., and 2 nd and 4 th aves.	n/a	H.E. Mayer Building	No Use Destroyed (ADWR 2001)	/ /50
A-1-3-8 BAD	Between Monroe and Jefferson sts., and 2 nd and Central aves.	55-624386	Wells Fargo Plaza 100 W. Washington Phoenix, AZ (First Interstate Bank)	Industrial*	01/01/30
A-1-3-8 BAD	Between Monroe and Jefferson sts., and 2 nd and Central aves.	55-806796	Maricopa Co. BRD 401 W. Jefferson St. Phoenix, AZ 85003	No Use	n/a
A-1-3-8 BAD	Between Monroe and Jefferson sts., and 2 nd and Central aves.	55-806797	Maricopa Co. BRD 401 W. Jefferson St. Phoenix, AZ 85003	No Use	n/a
A-1-3-8 BDA	1 st Ave. and Washington St.	n/a	Jefferson Square Ltd. 132 S. Central Ave. Phoenix, AZ 85003 Old Courthouse	Commercial*	n/a
A-1-3-8 BDA	1 st Ave. and Washington St.	55-629587	Jefferson Square Ltd. 132 S. Central Ave. Phoenix, AZ 85003 Old Courthouse	Air-conditioning*	04/03/63

Well Location Number	Location	ADWR Registration #	Owner	Well Use	Drill Date
A-1-3-8 DBD	125 E. Lincoln Phoenix, AZ 85004	55-801051	Phoenix Elementary School District 125 E. Lincoln Phoenix, AZ 85004	Irrigation Air- conditioning	/77
A-1-3-9 ADA	16 th and Jefferson sts.	55-626529	City of Phoenix Parks and Recreation (Eastlake Park) 16 th St. and Jefferson	Irrigation	03/ /47
A-1-3-9 BDD	12 th and Lincoln sts.	55-606389	G. Heileman Brewing City of Phoenix 251 W. Washington Phoenix, AZ 85003	Industrial*	/ /47
A-1-3-10 CDA	West of Papago Hwy, between Sky Harbor Circle and Buckeye Rd.	55-806937	City of Phoenix 200 W. Washington Phoenix, AZ 85003	n/a** Abandoned (ADWR 2002)	n/a
A-1-3-17 BBA	1239 S. 5 th Ave.	55-626532	City of Phoenix Parks and Recreation Harmon Park 1239 S. 5 th Ave.	Recreation Irrigation	05/18/57
A-2-3-32 CDA	Between Palm Lane and McDowell Rd., and Central and 3 rd aves.	55-520423	Greyhound Realty Corp. 111 W. Clarendon Phoenix, AZ 85013	n/a** Abandoned (Weston 1994)	03/07/88
A-2-3-33 DCC	12 th St. and Coronado	55-626528	City of Phoenix Parks and Recreation Coronado Park 12 th St. and Coronado	Recreation Irrigation*	12/12/55
A-2-3-33 DDC	1111 E. McDowell Rd Phoenix, AZ 85006	35-	Good Samaritan Hospital 1111 E. McDowell Rd. Phoenix, AZ 85006	Commercial	08/26/57
			OU2		
A-1-3-11 BAB	27 th and Monroe sts.	n/a	The Salvation Army Southwest Divisional Headquarters 2707 E. Van Buren St. Phoenix, AZ 85008 (Desert Hills)	Unused	n/a

Well Location Number	Location	ADWR Registration #	Owner	Well Use	Drill Date
A-1-3-12	Between Van Buren St. and Henshaw Rd and 32 nd and 40 th sts.	55-808132	Unknown	Irrigation	08/29/25
A-1-3-12 DDD	40 th St. and SPRR tracks	55-639522	Private citizen	Domestic	07/08/42
A-1-3-12 CAB	111 S. 34 th St. Phoenix, AZ 85034	55-802382	Garrett Turbine Engines 111 S. 34 th St. Phoenix, AZ 85034	Industrial	01-01-52
A-1-4-6 BCC	Between Bellevue and Beatrice sts., and 40 th and 42 nd sts.	35-	n/a	Irrigation**	/ /51
A-1-4-6 CCD	41 st St. and Van Buren	n/a	Wagon Wheel Bar 41 st St. and Van Buren	n/a* Covered with concrete (D&M 1987)	n/a
A-1-4-6 CD	320 N. 44 th St.	55-636731	Phoenix E. Investors 2813 E. Camelback Rd. Phoenix, AZ 85016	n/a* Destroyed (D&M 1987)	n/a
			OUI		
A-1-4-5 CBA	Between 48 th and 50 th sts., and Polk. and Roosevelt sts.	55-606555	Private citizen	Domestic Irrigation	01/0176
A-1-4-5 CBB	801 N. 48 th St. Phoenix, AZ 85008	55-640413	Private citizen	Domestic Irrigation	01/01/50
A-1-4-6 AB	4441 E. McDowell Rd. Phoenix, AZ 85008	55-628943	Anderson-Nelson Engineering. Co. 4441 E. McDowell Rd. Phoenix, AZ 85008 (Three-O)	Irrigation*	09/10/87
A-1-4-6 ACB	4431 E. Moreland Rd. Phoenix, AZ 85008	n/a	JPK Management 4431 E. Moreland Rd. Phoenix, AZ 85008	Irrigation* Plugged, Unusable (D&M 1987)	n/a
A-1-4-6 ABA	1502 N. 46 th St.	55-801593	Private citizen	Domestic*	01/01/48

Well Location Number	Location	ADWR Registration #	Owner	Well Use	Drill Date
A-1-4-6 ACC	1042 N. 46 th St. Phoenix, AZ 85008	n/a	Private citizen	Irrigation*	10/23/57
A-2-4-31 DDD	4626 E. Granada Rd. Phoenix, AZ 85008	55-650584	Private citizen	Irrigation Domestic	n/a
A-2-4-31 DDD	4626 E. Granada Rd. Phoenix, AZ 85008	55-553400	Private citizen	Irrigation Domestic	02/03/96

n/a – not available

* not in use

** abandoned