

## **56th Street and Earll Drive**

### Water Quality Assurance Revolving Fund ([WQARF](#)) Site

#### **Boundaries:**

The 56th Street and Earll Drive WQARF Site (Site) groundwater contamination plume in Phoenix, Arizona is bounded by Earll Drive to the north, Loop 202 (Red Mountain Freeway) to the south, 56th Street to the east and 32nd Street to the west.

The plume boundaries depicted on the [Site map](#) represent the Arizona Department of Environmental Quality's (ADEQ) interpretation of data available at the time the map was constructed. The map is intended to provide the public with basic information as to the estimated extent of known contamination as of the date of map production. The actual extent of contamination may be different. Therefore, the plume may change in the future as new information becomes available.

#### **Site Status Update:**

[Freescale Semiconductor Inc.](#) (Freescale), a corporate successor to Motorola, Inc., continues to collect groundwater samples semi-annually. [Trichloroethene](#) (TCE) and [tetrachloroethene](#) (PCE) levels were detected as high as 510 and 29 µg/l respectively. The most recent sampling results indicate that TCE and PCE levels present in the groundwater have remained relatively stable from year to year.

Freescale and ADEQ are negotiating an agreement for Freescale to implement an [early response action](#) (ERA) to address the TCE and PCE in the groundwater. Freescale is proposing to construct a groundwater [pump and treat system](#) as part of the ERA. Freescale and [Salt River Project](#) (SRP) are working on an agreement for SRP to accept the treated water into the Grand Canal system for non-potable beneficial reuse as irrigation water. Freescale has installed two additional groundwater [monitor wells](#) and two [extraction wells](#) under an approved workplan with ADEQ. After the negotiated agreement is signed by both parties, Freescale will submit it to ADEQ for approval of the ERA design, installation and operation of a treatment plan. Implementation of the ERA will hopefully reduce the cost and scope of a future final remedy.

#### **Community Involvement Activities:**

A [community advisory board](#) (CAB) has been formed for the Site. Details of meeting agendas and [minutes](#) can be viewed at the ADEQ Web site. These meetings are open to the public. The most recent [fact sheet](#) can be found on the ADEQ Web site.

#### **Site History:**

**1985:** [Motorola](#) began investigation of the 56th Street facility. Investigations were conducted in stages and included:

- Investigation of possible source locations

- Soil [borings](#) and sampling program
- On- and off-site soil gas investigations
- Off-site soil gas investigation identified five potential source areas for [volatile organic compound](#) contamination
- Installation of 39 groundwater monitor wells (including 3 multi-port monitor wells)
- Groundwater sampling program (currently semi-annual)
- [Aquifer](#) tests and groundwater modeling
- Investigation of inorganic constituents found in groundwater

**1989:** The Site was originally investigated as part of the [Motorola 52nd Street National Priorities List Superfund Site](#). However, groundwater data indicated that there were two separate and distinct areas of contamination. Therefore, the Site was disassociated from the larger Motorola 52nd Street Site.

**1993-1996:** The following ERA activities have been conducted by Motorola:

- Abandonment of on-site [drywells](#) (1993)
- Pilot scale [bioremediation](#) test operations
- On-site [soil vapor extraction](#) system installed (1994)
- On-site soil excavation (1996)

**1997:** Following an on-site confirmation soil gas investigation, ADEQ granted a soil No Further Action determination to Motorola.

**2004:** The Site was placed on the [WQARF Registry](#) on June 2, 2004 due to the presence of PCE and TCE in the groundwater at levels that exceeded the Arizona [Aquifer Water Quality Standard](#) of 5.0 µg/l. The eligibility and evaluation score for placement on the WQARF Registry was 40 out of 120.

**2005:** Freescale Semiconductor Inc. (a successor company to Motorola) installed additional monitor wells during the Third Quarter 2005 to the west and southwest of TCE contaminant plume to further delineate the extent of groundwater contamination. Following installation and sampling of these wells, an ERA evaluation was conducted

**2006:** Freescale agreed to implement an ERA evaluation to evaluate potential impact to a [downgradient](#) SRP well for the Site. The maximum PCE and TCE levels present in the groundwater were 46 µg/l and 770 µg/l, respectively.

**2007:** Freescale tentatively selected the use of a groundwater extraction and treatment system to address the contaminant plume. The system will employ [granular activated carbon](#) to remove contaminants from the groundwater prior to discharge to the Grand Canal.

**2008:** Freescale was involved in negotiations with the various landowners of the land adjacent to the Grand Canal that would be the site of the extraction and treatment system.

**2009:** Freescale prepared a work plan describing the installation and development of two groundwater extraction and two groundwater monitoring wells on the north side of the Grand Canal. The four wells comprise the first phase of the ERA to contain and control groundwater

contamination in the area.

**2010:** Freescale collected groundwater samples and water level data for 39 monitor wells in April and October. Freescale and Clear Creek continued working on the permitting and environmental clearances required to construct the Groundwater Pump and Treat System.

### **Contaminants:**

The current contaminants of concern in groundwater include [tetrachloroethene](#) (PCE) and [trichloroethene](#) (TCE). Contaminants of concern at the Site may change as new data become available.

### **Public Health Impact:**

There is no known public health impact to drinking water because there are no known drinking water wells in the area of the contaminant plume. A [public health consultation](#) completed by the [Arizona Department of Health Services](#) determined that there is no public health threat associated with the use of water from the private irrigation wells located in the vicinity of the Site. All owners of the private irrigation wells are aware that these wells are not suitable for public drinking water purposes.

### **Site Hydrogeology:**

The depth to groundwater in the area ranges from approximately 13 to 75 feet below ground surface. Groundwater flow in the Site area is to the southwest.

### **Contacts:**

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

### **Information Repository:**

Interested parties can review select Site documents at the [Saguaro Branch Public Library](#), 2808 N. 46th St., Phoenix, 85008, (602) 262-6801.

The complete official Site file can be reviewed at the ADEQ Main Office located at 1110 W. Washington Street, Phoenix. Please contact (602) 771-4380 or (800) 234-5677 to schedule an appointment with 24-hour notice to review these documents. Once all documents requested have been collected, you will be contacted for a review Monday through Friday from 8:30 a.m. to 4:30 p.m. at the ADEQ Records Management Center, 1110 W. Washington Street in Phoenix, AZ.