



Motorola 52nd Street Superfund Site Community Information Event



Wednesday, February 25, 2009

6:30 p.m. to 8:30 p.m.

Kenilworth Elementary School

510 North 5th Avenue

Phoenix, Arizona

OU#09-109

ADEQ and EPA held a community information event at Kenilworth Elementary School to inform the community about the status of the Motorola 52nd Street Superfund Site. The event began with a presentation from ADEQ and EPA personnel (please see the attached PowerPoint presentation) and was followed by a question and answer session. Posters and other handouts were made available throughout the event. Exhibitors included:

1. Arizona Department of Environmental Quality
2. United States Environmental Protection Agency
3. Freescale Semiconductor
4. Honeywell (available in English and Spanish)
5. Conestoga-Rovers & Associates
6. Salt River Project
7. Lindon Park Neighborhood Association (Technical Assistance Grant Recipient)

If you require further information regarding this event, please contact Wendy Flood, (602) 771-4410.

Motorola 52nd Street Superfund Site

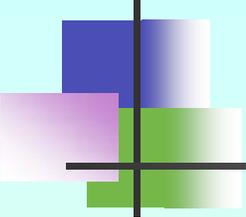
Public Meeting
February 25, 2009



Arizona Department of
Environmental Quality

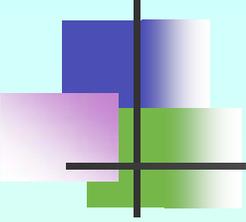


U.S. Environmental
Protection Agency, Region 9



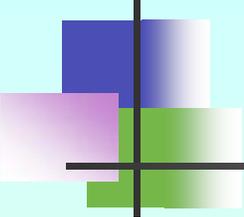
Agenda

- **Introductions**
- **Overview of the Superfund Program**
- **Overview of Motorola 52nd Street Site**
- **OU1**
- **Honeywell 34th Street**
- **OU2**
- **OU3**
- **EPA/ADEQ Announcements**
- **Questions & Answers**
- **Poster Session**



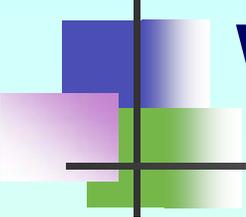
Introductions – ADEQ

- Sherri Zendri - OU1/OU2 Project Manager
- Joellen Meitl - OU3 Project Manager
- Wayne Miller - Sitewide Project Hydrologist
- Wendy Flood - Sitewide Community Involvement Coordinator



Introductions - EPA

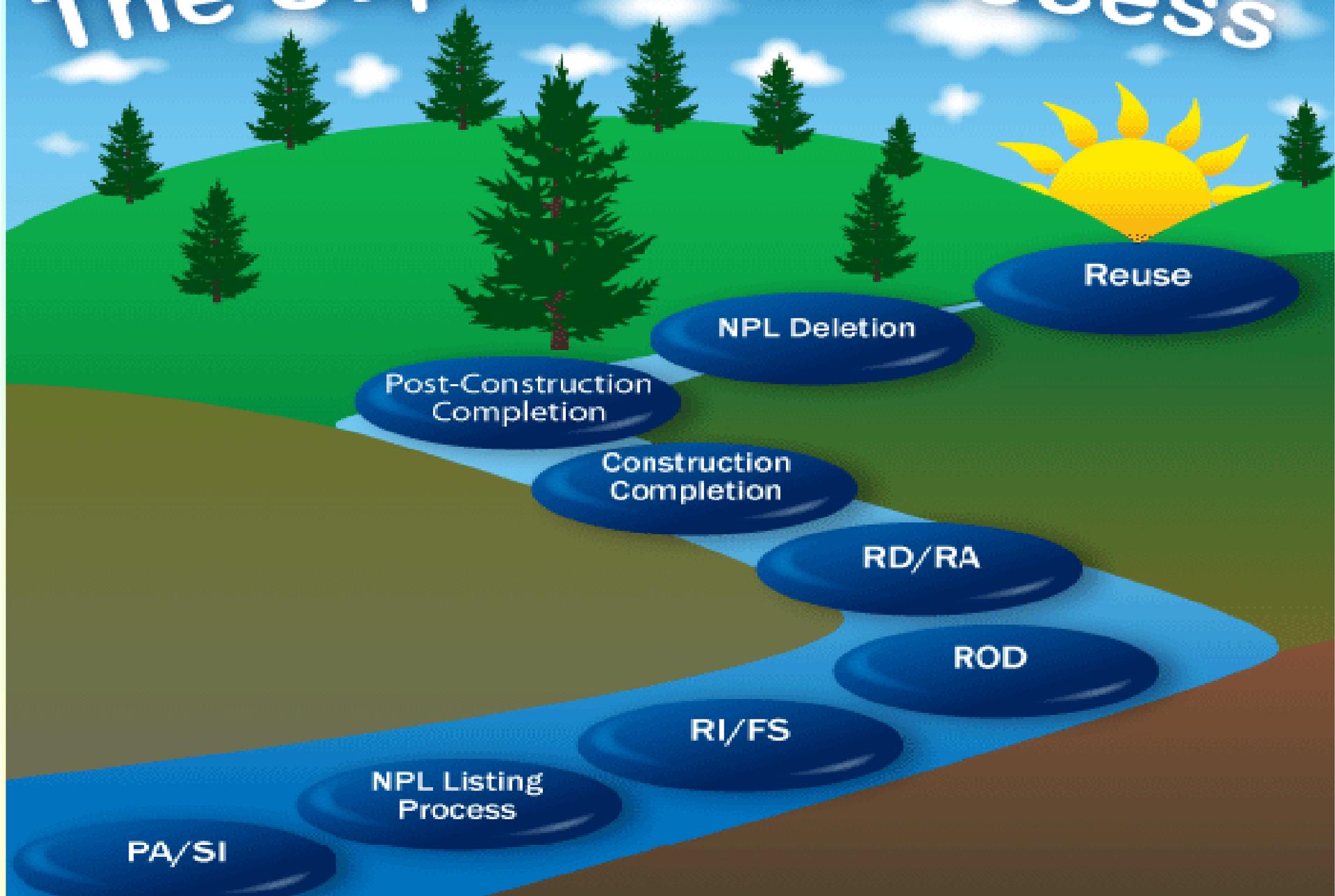
- Leah Butler - OU1 Project Manager
- Andria Benner- OU2/OU3 Project Manager
- Janet Rosati - OU3 Remedial Project Manager
- Leana Rosetti - Sitewide Community Involvement Coordinator

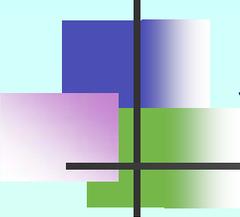


What is a Superfund Site?

- Common name for CERCLA
- Federal authority to cleanup hazardous releases
- Cost recovery from Potentially Responsible Parties – “PRPs”
 - Current owner
 - Owner/operator at the time of release
 - Disposer
 - Transporter

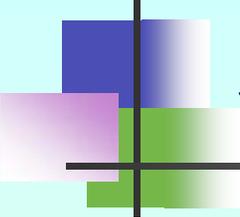
The Superfund Process





Motorola 52nd Street Superfund Site

- Soil and groundwater contamination was discovered in the 1980s - multiple sources/PRPs
- Became a Superfund Site in 1989
- Primary contaminants of concern:
 - TCE, PCE, TCA, and degradation products such as vinyl chloride
- **No drinking water wells are impacted**

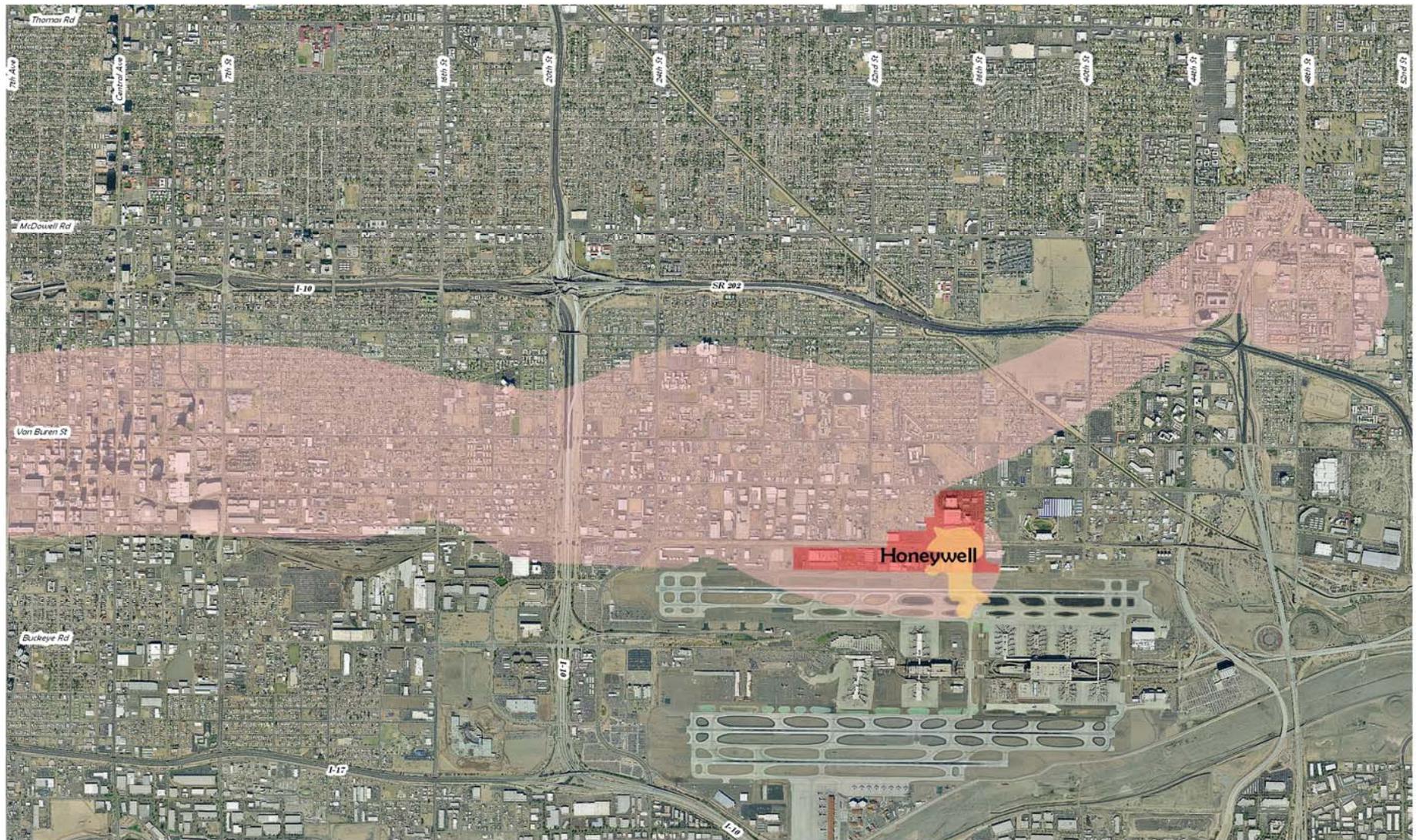


Motorola 52nd Street Superfund Site

- Multiple Risk Assessments by ADHS & ATSDR (Agency for Toxic Substances and Disease Registry) conclude site poses no significant risk to public health
- Site divided into 3 operable units (OUs)
 - OU1: ADEQ lead
 - OU2:
 - ADEQ Lead for investigation
 - EPA Lead for Treatment System Operation
 - OU3: EPA lead

52ND STREET SUPERFUND SITE

PHOENIX, ARIZONA



0 0.5 1 Miles

Oct. 24, 2008

Legend

-  Historical Extent of Jet Fuel Floating on Water Table
-  Honeywell 34th St Facility
-  Motorola 52nd St, 2006 Contaminant Plume

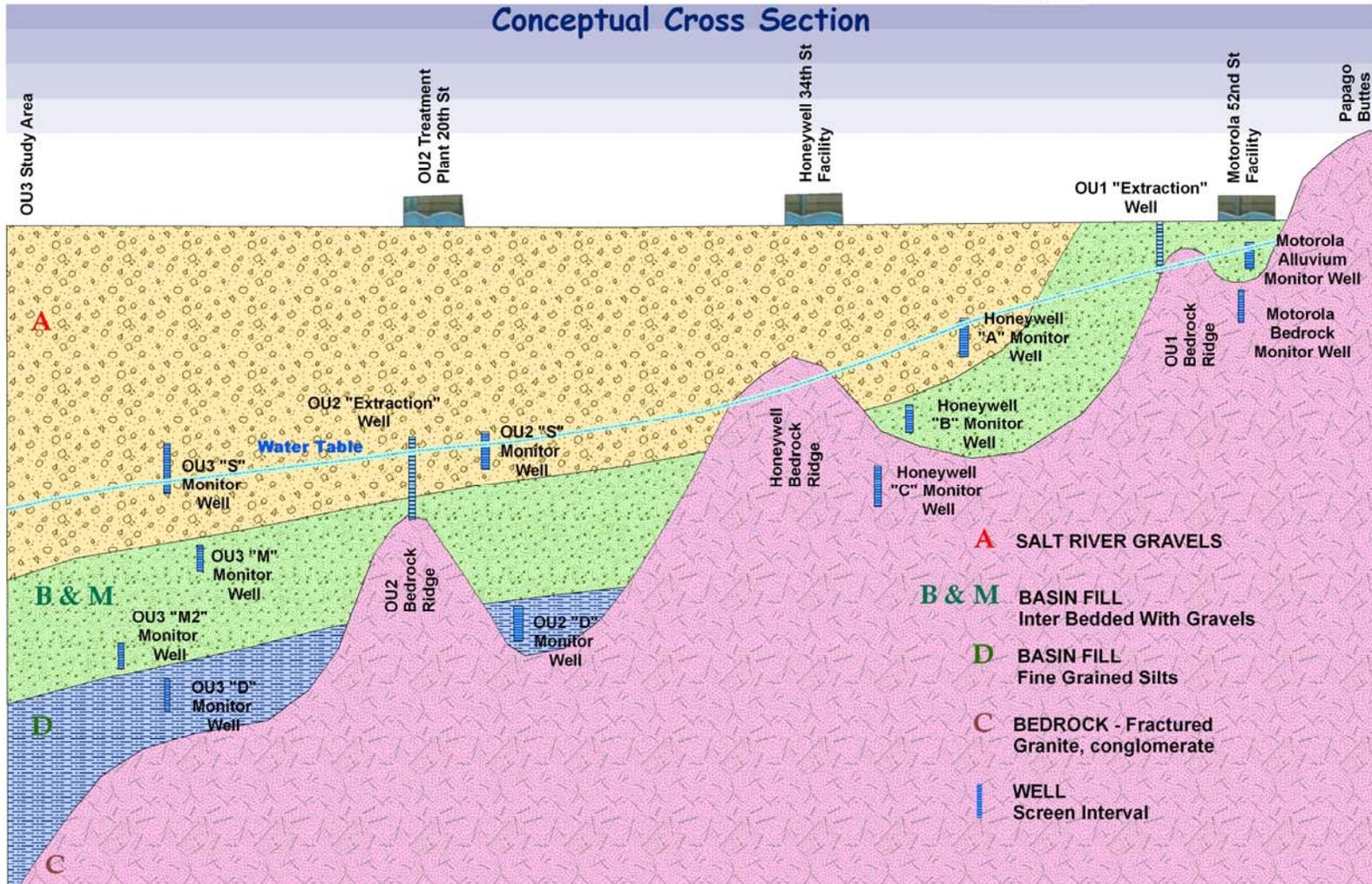




Motorola 52nd Street Superfund Site



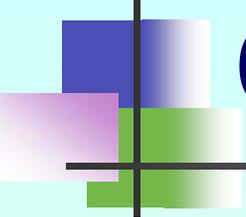
Conceptual Cross Section



Layer sequence determined by ADEQ

Kristina Paschall: Project Manager
David Haag: Project Hydrologist
TS Summers: GIS

Note: Drawing Not to Scale

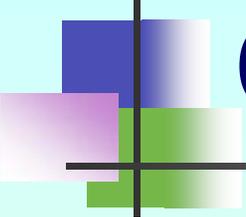


OU1 Background

- Approx. 0.75 mi² at east end of plume
- 52nd Street Facility formerly owned and operated by Motorola - solvents used for wafer/circuit cleaning
- TCA tank inventory discrepancy discovered in late 1982 - leaking UST uncovered in Courtyard area
- Freescale is successor to Motorola
- Property currently owned and operated by ON Semiconductor

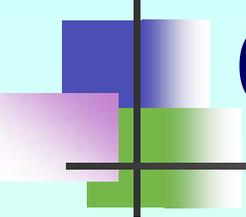
OU1 Treatment Plant





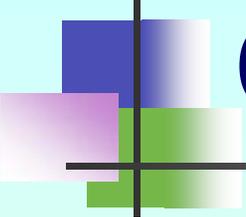
OU1 Effectiveness

- Freescale continues to operate the treatment system with EPA and ADEQ oversight:
 - 128.2 million gallons of water treated in 2008
 - From 1992 (start-up) to 2008, over 2.95 billion gallons of water have been treated
 - Approximately 605 pounds of VOCs removed in 2008
 - Estimated total of over 19,890 pounds removed since start-up
- Groundwater monitoring results indicate that the OU1 Treatment Plant is operating successfully



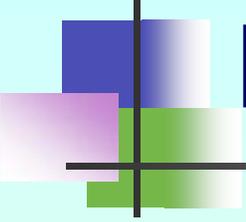
OU1 Recent Activities

- Freescale provides sampling results to EPA and ADEQ semi-annually as well as in the annual Effectiveness Report
- In 2008, three additional monitoring wells were installed as part of a bedrock extraction pilot test
- EPA and ADEQ continue to monitor the effectiveness of the system and make adjustments as needed



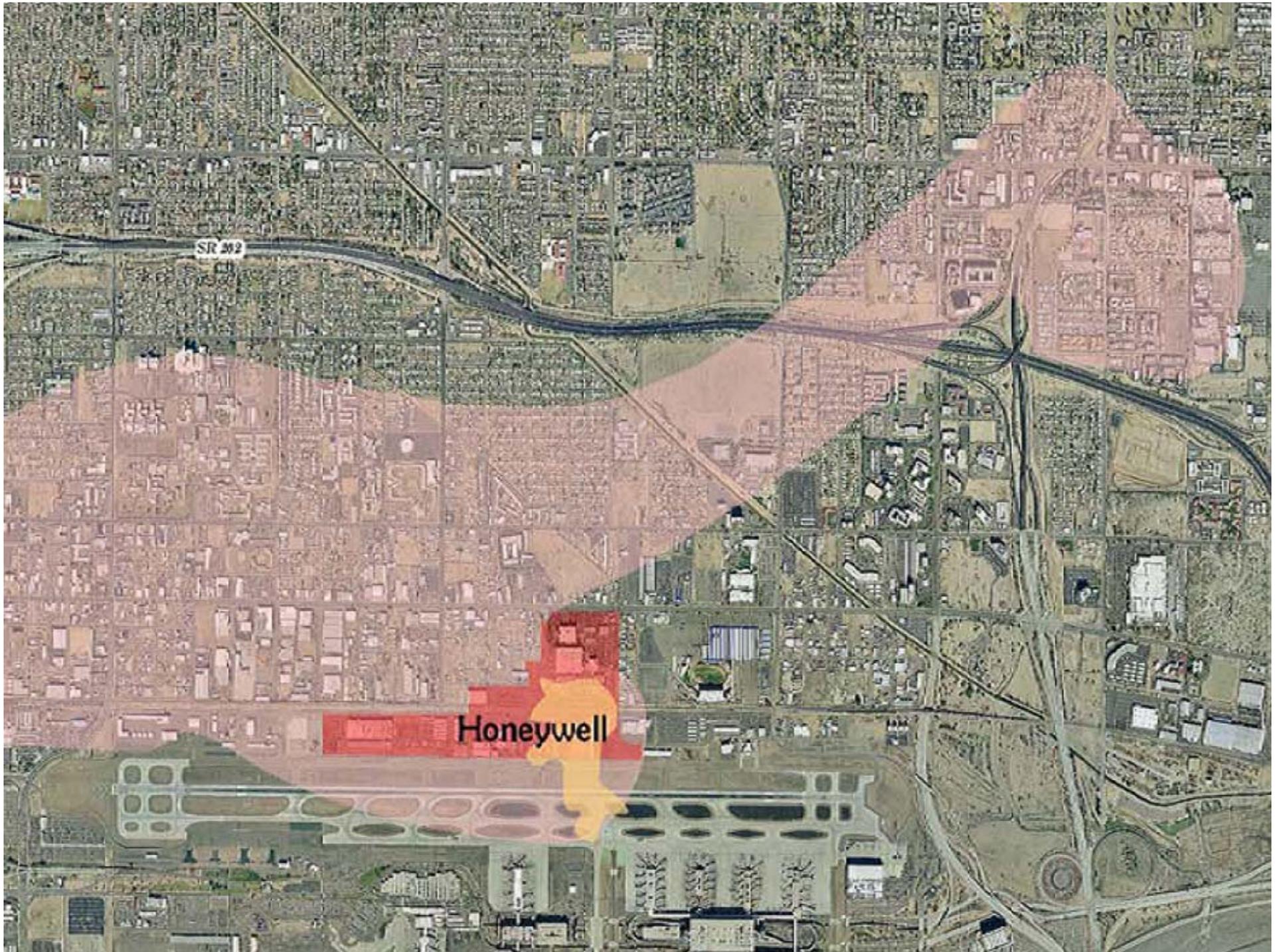
OU1 On-Going Challenges

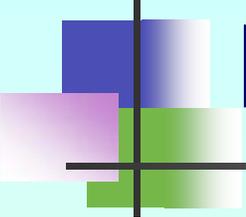
- Extraction of contaminants from bedrock is very difficult
- The OU1 Treatment Plant is an Interim Remedy – a final remedy must be selected to achieve long-term groundwater cleanup



Honeywell 34th Street

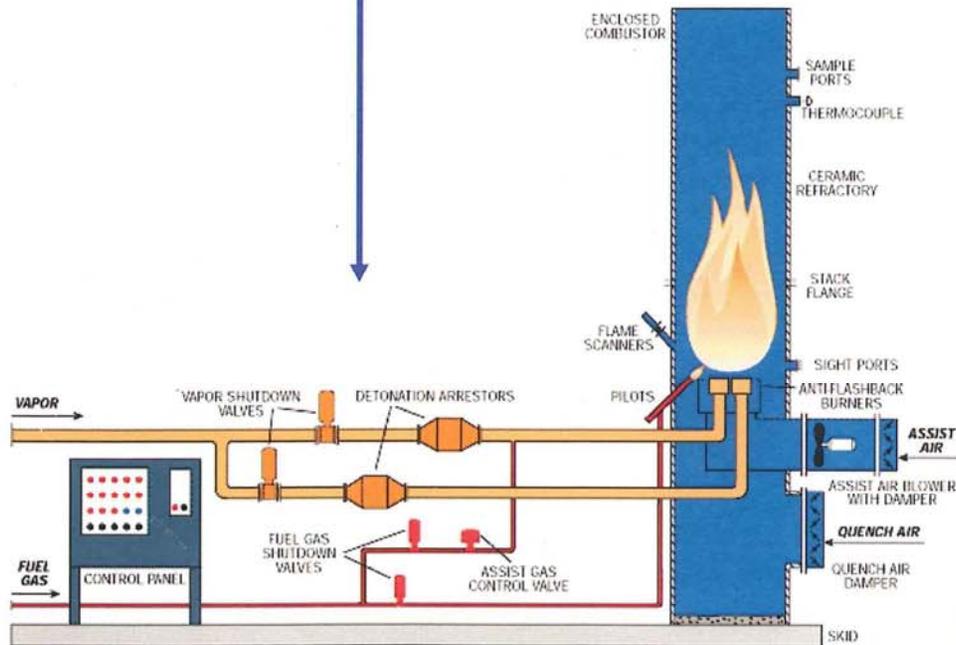
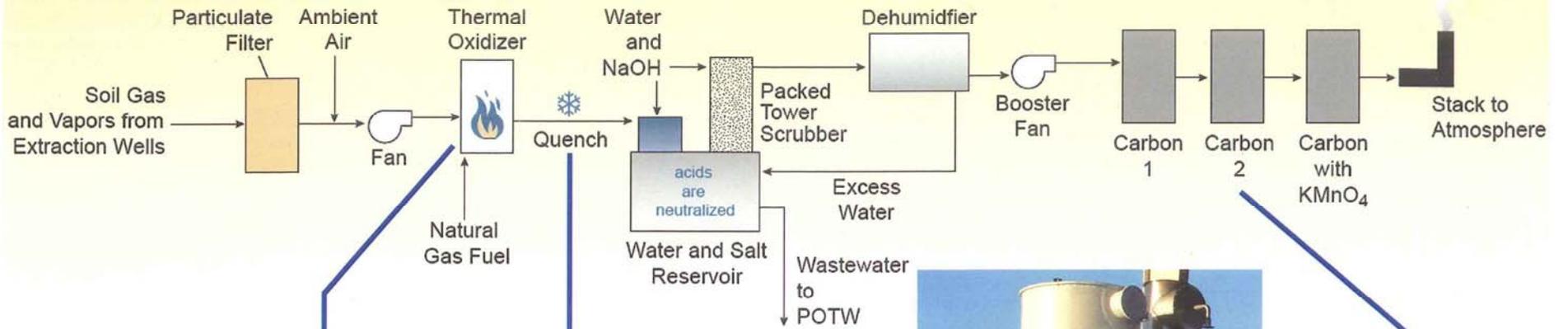
- Located within the OU2 portion of the Motorola 52nd Street site.
- Chlorinated solvent release in feasibility study phase
- Jet fuel release discovered in 1999 has been fully characterized and in the corrective action phase

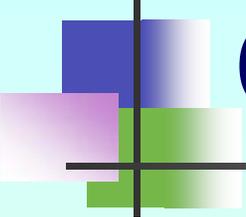




Bio-enhanced Soil Vapor Extraction System

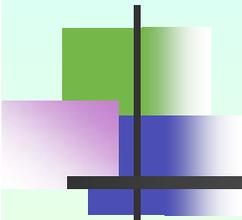
- The BSVE system was permitted by the Maricopa County Air Quality Department.
- Includes five separate treatment steps:
 - thermal oxidation,
 - quenching,
 - scrubbing,
 - carbon filtration
 - potassium permanganate filtration
- Best available technology given geology of area and chemicals of concern





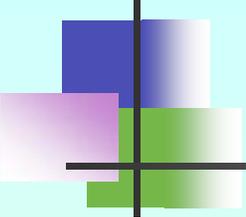
Ongoing Challenges

- In September 2008, ADEQ approved Honeywell's final Focused Remedial Investigation and Addendum.
- Work on the Focused Feasibility Study is planned to begin in the first half of 2009.
- The final groundwater remedy (cleanup) for OU2 will need to address all the chemicals of concern for both the Superfund site and the jet fuel releases at the Honeywell Facility



Operable Unit 2 Update

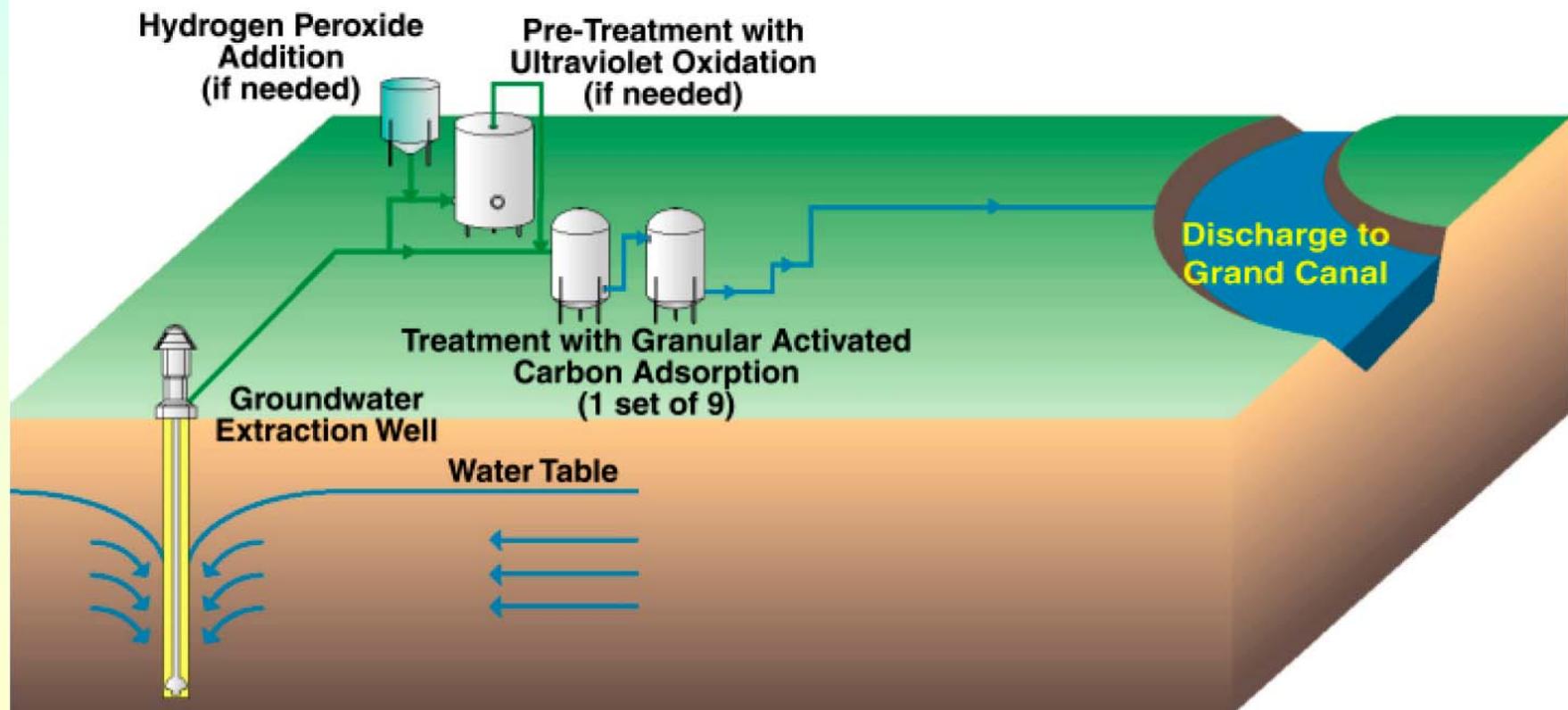
**Leah Butler
US EPA**



OU2 Background

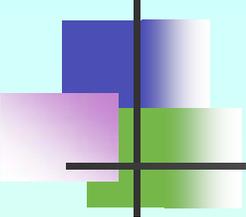
- Area covers approx. 3mi² downgradient of OU1
- Combined contamination from Motorola, Honeywell, and other smaller facilities
- In 1994, the Agencies decided to contain the plume in the vicinity of I-10 by installing another groundwater treatment plant
- OU2 Treatment System Components
 - Maintain a capture zone across entire width and depth of plume
 - Remove and permanently destroy groundwater contamination above drinking water standards
 - Discharge treated water to the Grand Canal

OU2 Treatment System



OU2 Treatment Plant

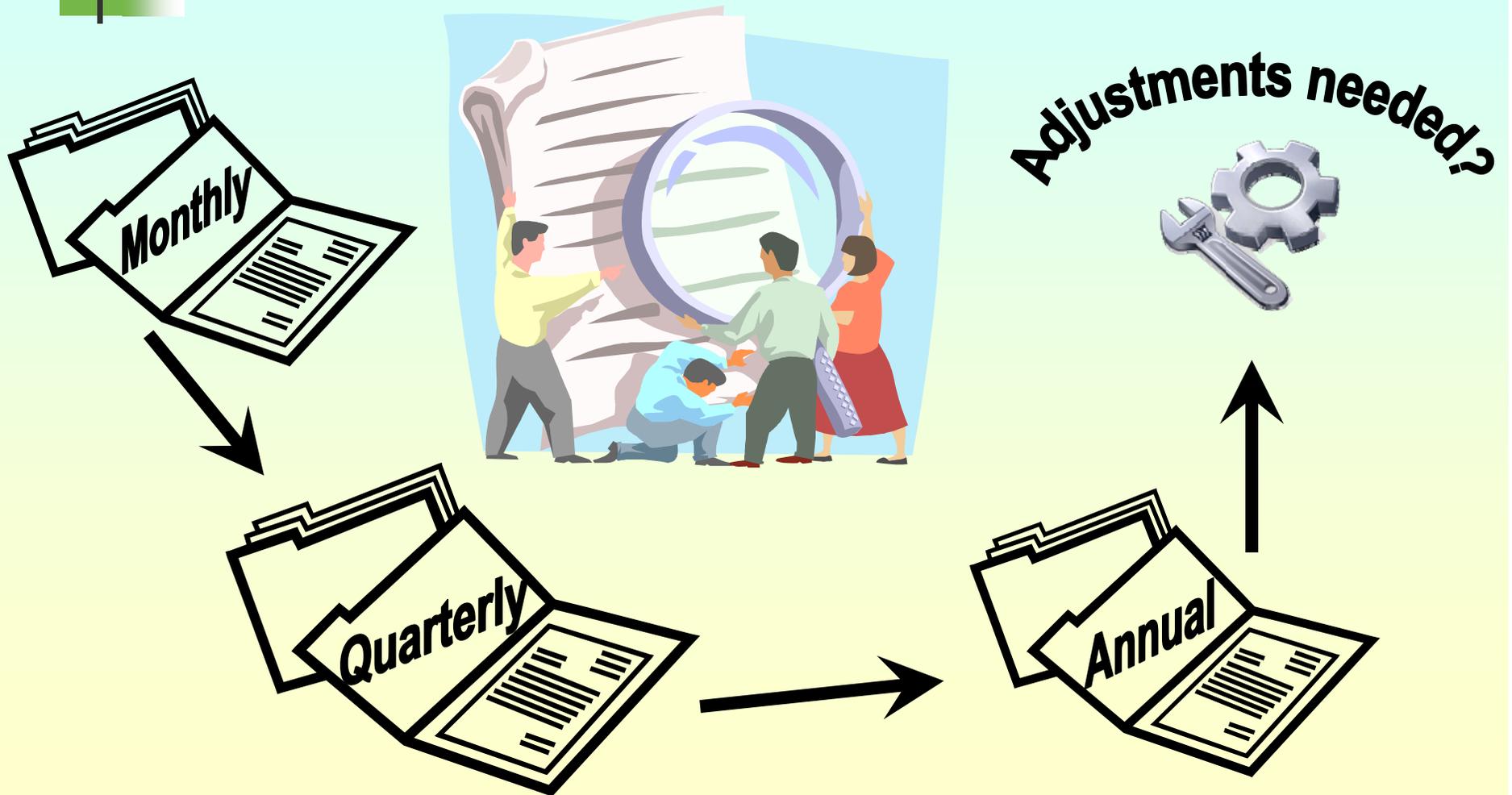


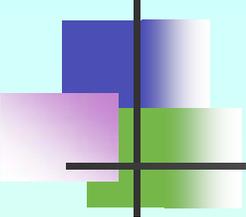


OU2 Effectiveness

- Honeywell and Freescale continue to operate the treatment system with EPA and ADEQ oversight:
 - 969 million gallons of water treated in 2007
 - From 2001 (start-up) to 2007, over 6.84 billion gallons of water have been treated
 - Approximately 1,150 pounds of VOCs removed in 2007
 - Estimated total of over 9,800 pounds removed since start-up

OU2 Ongoing Activities



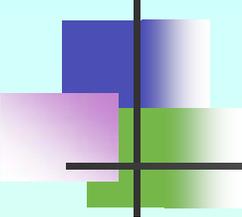


OU2 Recent Activities

- In July 2008, Honeywell and Freescale requested a variance for boron levels in OU2 discharge
 - Analyzing source of boron in the aquifer (naturally occurring and/or man-made)
 - Considering full range of options to address the boron issue
- In 2007, the Companies installed 5 monitoring wells, 3 piezometers, and one soil boring

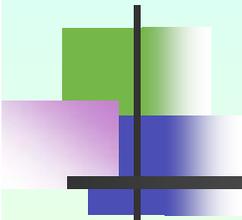


figure 1.2
 GES MONITOR WELL NETWORK
 OPERABLE UNIT 2 AREA
 52nd STREET SUPERFUND SITE
 Phoenix, Arizona



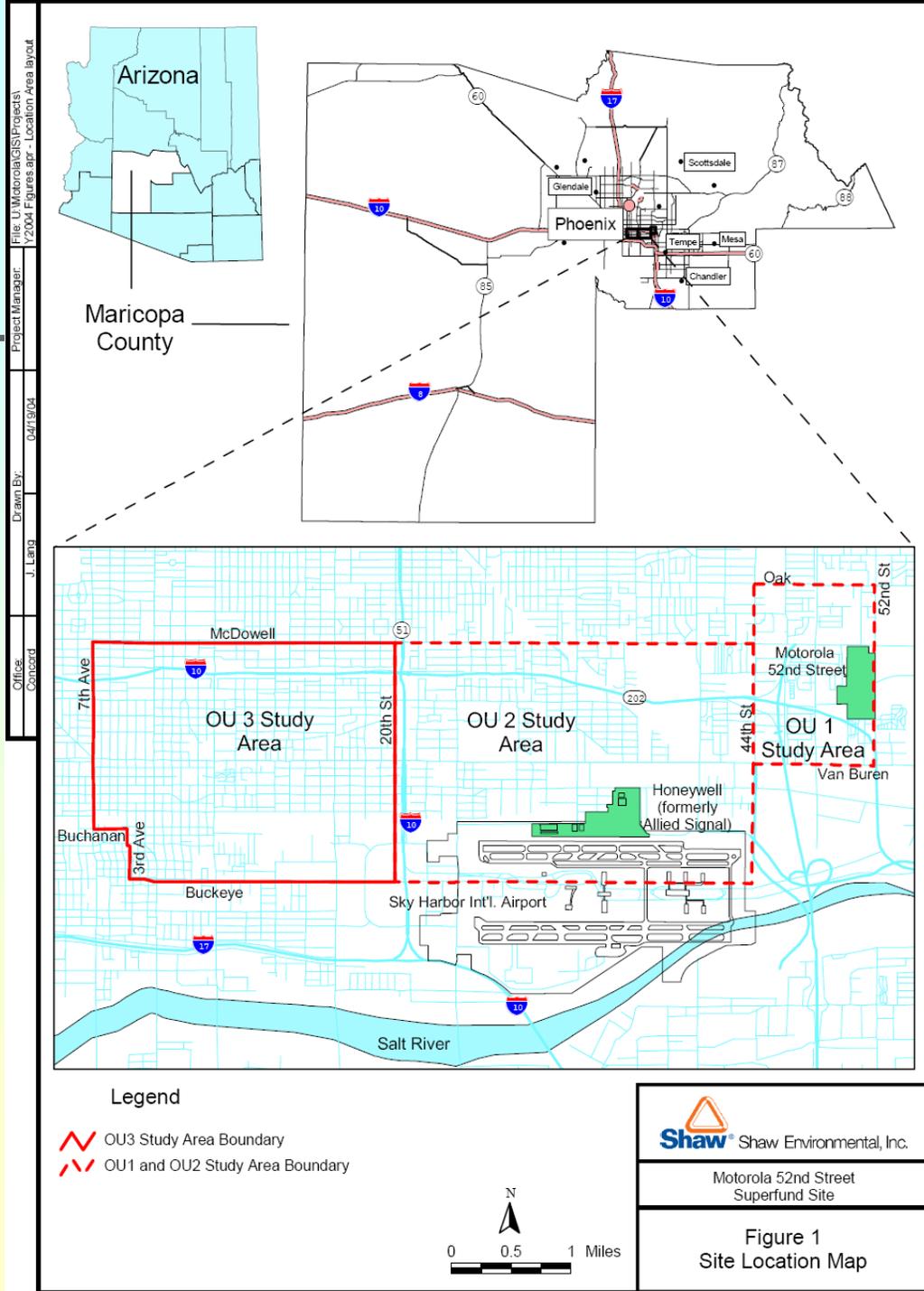
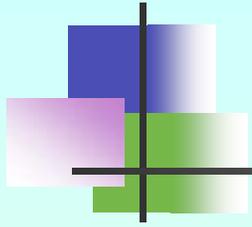
OU2 On-going Challenges

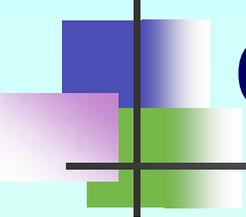
- Groundwater decline due to drought conditions and overpumping
- EW-S: low pumping rate could compromise plume capture in the south if further reductions are needed
- The OU2 Treatment Plant is an Interim Remedy



Operable Unit 3 Update

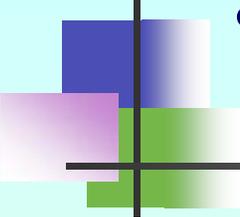
**Janet Rosati
US EPA**





Operable Unit 3 (OU3) Background

- In 1993, ADEQ and EPA established the boundaries of OU3
- To begin the Remedial Investigation process, 28 groundwater monitoring wells were installed by EPA, with support from ADEQ, between 2002 and 2003
- Wells are sampled in March and September
- Contaminant concentrations are decreasing
 - Highest concentration of TCE in 2002 was 760 ppb
 - Highest concentration of TCE in 2008 was 190 ppb

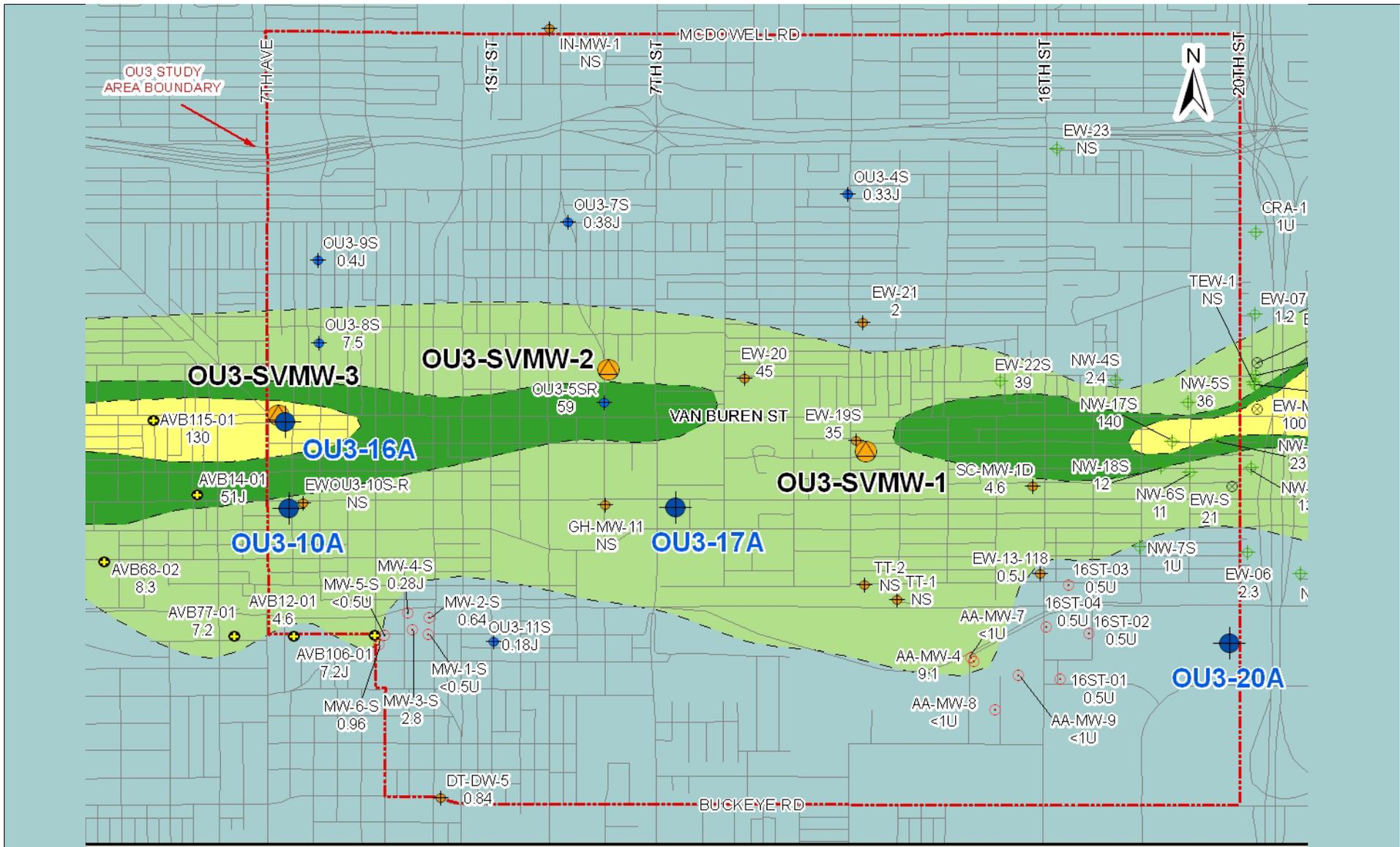


OU3 Administrative Order on Consent (AOC) and Statement of Work (SOW) for Remedial Investigation and Feasibility Study (RI/FS)

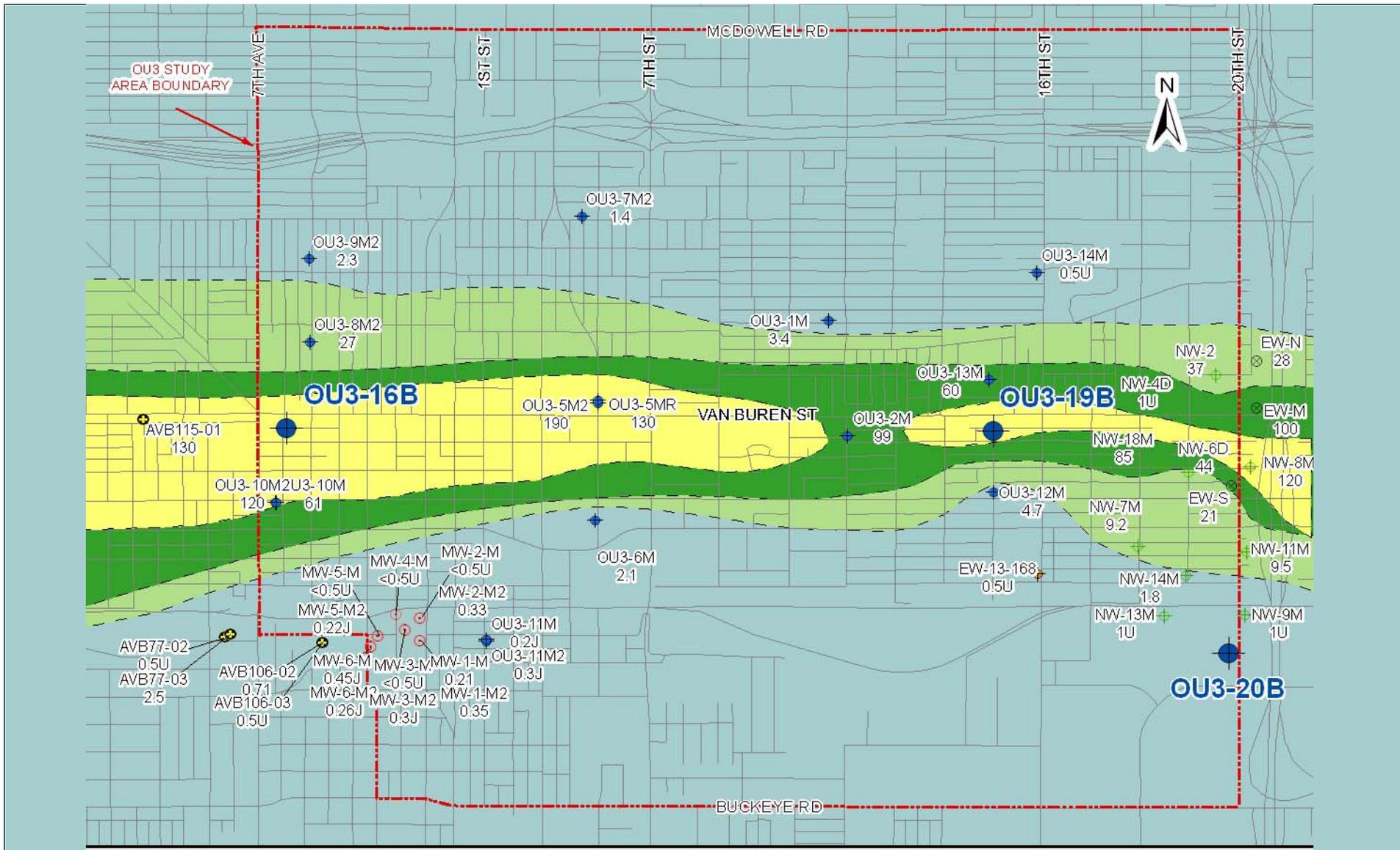
EPA and ADEQ have negotiated an AOC and an SOW with two Potentially Responsible Parties (PRPs), Honeywell and the Arizona Public Service Company, to conduct an RI/FS and prepare a Baseline Groundwater Human Health Risk Assessment

RI work

- Install 8 groundwater monitoring wells to fill in data gaps
- Install 3 soil vapor monitoring wells in the core of the plume
- Data from the soil vapor monitoring wells will help determine if vapors are migrating up from contaminated groundwater
- Soil vapor data will be used in the Risk Assessment to evaluate the vapor intrusion to indoor air pathway



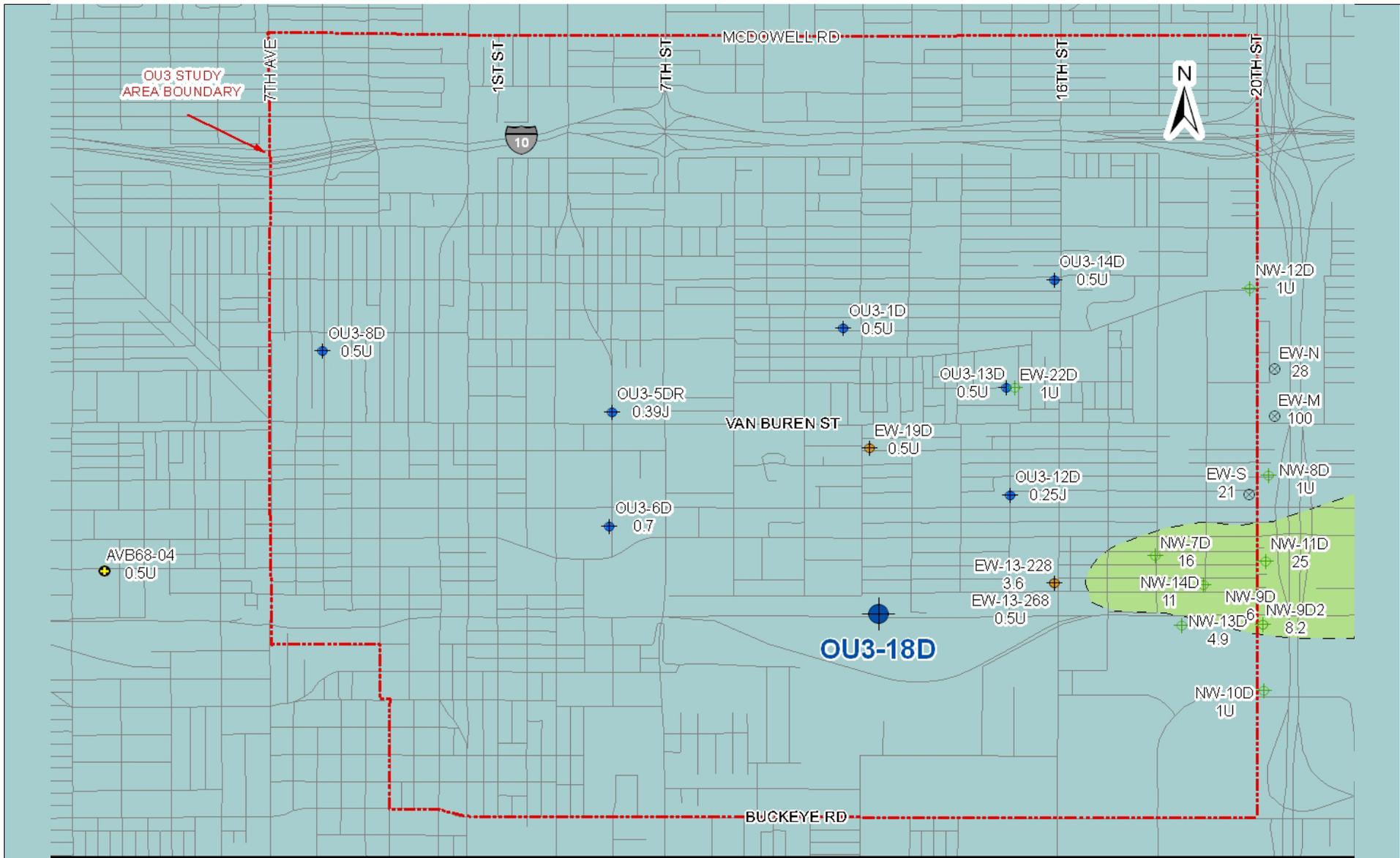
**TCE CONTOUR MAP
 SHALLOW ZONE
 SEPTEMBER 2008**



- ◆ Proposed Groundwater Well
- ◆ OU3 Phase I and Phase II Monitoring
- ◆ OU3 Program Private Monitoring
- ⊗ OU2 Extraction
- + OU2 Program Monitoring
- ⊙ PRP Monitoring Well
- ⊙ WQARF

≥5 µg/L
 ≥50 µg/L
 ≥100 µg/L

TCE CONTOUR MAP INTERMEDIATE ZONE SEPTEMBER 2008

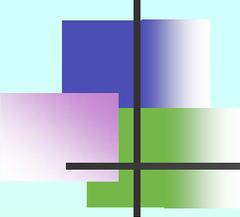


- Proposed Groundwater Well
- OU3 Phase I and Phase II Monitoring
- OU3 Program Private Monitoring
- OU2 Extraction
- OU2 Program Monitoring
- PRP Monitoring Well
- WQARF

≥5 µg/L

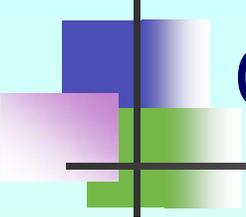
TCE CONTOUR MAP DEEP ZONE SEPTEMBER 2008





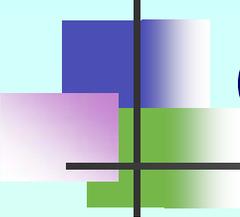
Remedial Investigation – Next Steps

- **Spring 2009** – OU3 Working Group will submit a Draft Work Plan, Field Sampling Plan and Quality Assurance Project Plan in accordance with the SOW
- **Summer 2009** – Final Work Plan, Field Sampling Plan and Quality Assurance Project Plan
- **Fall 2009** – Install groundwater monitoring wells and soil vapor monitoring wells
- **90 days after Notification of Completion of Field Work** – Draft RI Report and Draft Groundwater Baseline Risk Assessment
- **45 days after approval of RI** – Draft OU3 Feasibility Study Work Plan



OU3 RI/FS and Community Involvement

- Affected residents and businesses will be notified of field activities a minimum of one week in advance of scheduled work via door hangers or flyers distributed door-to-door
- Progress updates will be provided through community meetings, fact sheets and flyers



OU3 RI/FS and Community Involvement

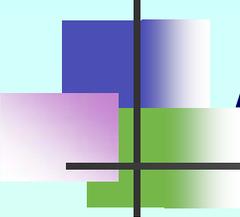
- Draft OU3 documents will be available to the community on the Motorola 52nd Street Portal – the web address is:

<https://extranet.shawgrp.com/sites/Motorola/public/default.aspx>

Contact Janet Rosati for log-in information

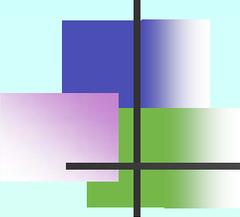
rosati.janet@epa.gov

(415) 972-3165



ADEQ & EPA Announcements

- **Please sign up for the Site Mailing List**
- **Information is available online**
 - www.epa.gov/region09/Motorola52ndSt
 - <http://www.azdeq.gov/environ/waste/sps/phxsites.html#mot52a>
- **Document Repository Locations**
 - **ADEQ Records Center (M-F 8:30am-4:30pm)**
1110 W. Washington St. Phoenix, AZ 85007 (602) 771-4154
 - **Phoenix Public Library, Saguaro Branch**
2802 North 46th St. Phoenix, AZ (602) 262-6801
 - **Burton Barr Central Library**
1221 N. Central Ave. Phoenix, AZ 85004 (602) 262-4636



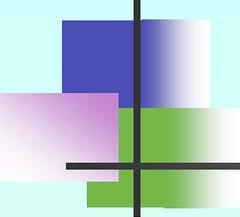
How to Contact ADEQ

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How to Contact EPA

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Rosetti.Leana@epa.gov

Andria Benner
OU2/ OU3 Project
Manager
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Benner.Andria@epa.gov

EPA Toll-free Message Number:
1-800-231-3075

Janet Rosati
OU3 Project Manager
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