

OU #10-046

**Phoenix-Goodyear Airport (PGA) Area/Western Avenue Plume  
Community Advisory Group (CAG) Meeting**

**Thursday, November 5, 2009 at 6:30 p.m.  
Goodyear City Hall, Room 117  
190 N. Litchfield Rd., Goodyear, AZ 85338**

**FINAL MINUTES**

**CAG Members in Attendance:**

Susan Kagan  
Diane Krone  
Frank Scott  
Brenda Holland

**ADEQ Staff in Attendance:**

Jennifer Edwards Thies, Remedial Projects Unit  
Manager  
André Chiaradia, Western Avenue Project Manager  
Bob Peeples, Hydrologist  
Felicia Calderon, Community Involvement Coordinator

**EPA Staff in Attendance:**

Catherine Brown, PGA-North Project Manager  
Viola Cooper, Community Involvement Coordinator

**Others in Attendance:**

Kirk Craig, AMEC Geomatrix  
David Iwanski, City of Goodyear  
Larry Friend, ITS1  
Greg Wallace, Errol L. Montgomery & Associates,  
Inc.  
Leanne Austrins, CH2M Hill  
Lisa Amos, Maricopa Flood Control District  
Mary Moore, Lindon Park Neighborhood Association

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**1. Call to Order / Introductions – Diane Krone**

Ms. Krone, CAG Co-chair, facilitated the meeting. CAG members and all meeting attendees introduced themselves.

**2. Update of PGA North activities – Introduction by Catherine Brown, EPA Remedial Project Manager for C. Kirk Craig, P.E. Senior Engineer, AMEC Geomatrix**

Ms. Brown introduced herself and briefed the CAG on her work experience with EPA prior to her PGA North project management appointment. Ms. Brown announced that Jeff Sussman from Goodyear Tire & Rubber Company and Nicole Coronado, ADEQ Project Manager, were not able to attend the CAG meeting, and therefore there would not be a PGA South presentation. Ms. Brown provided a brief update on recent PGA North and South activities. Ms. Brown then turned over the meeting to Mr. Craig.

Mr. Craig initiated his presentation to the CAG with a remediation review of the PGA North Site. Mr. Craig's presentation proceeded with site details that included updates on the groundwater plume and investigation, performance results for existing treatment systems, on-site revegetation, plan for regional treatment of groundwater in the northeast, and review of the in-situ groundwater treatment system.

**See slide presentation below**

Ms. Holland questioned if the plume size has decreased since remediation began. Mr. Craig stated that the plume has maintained relatively the same shape, and hopefully the performance of a newly installed treatment system will alter the plume's current situation.

Mr. Craig discussed piezometer wells, which are small diameter observation wells used to measure parameters or characteristics of the aquifer. These were installed at the site.

Mr. Craig advised the CAG that AMEC is actively working on getting approximately 2 ½ miles of pipeline in place to install injection and extraction wells along Dysart Road that runs between the cities of Avondale and Goodyear.

Ms. Krone inquired why the plume was expanding towards the northeast. In response Mr. Craig stated that the plume's movement can be attributed to a couple of theories that included both the natural groundwater movement and the pumping out of groundwater attributed to population growth.

The CAG discussed the environmental sustainability of the remediation equipment currently used at the site. Ms. Brown stated that the EPA Superfund Program has a "Greener Cleanups" initiative that looks to limit the carbon footprint of remediation equipment at Superfund sites in the U.S., but this site did not make the list because of a deadline and the amount of power required at this site.

### **3. City of Goodyear report and Brownsfields Redevelopment Project Update – David Iwanski, COG Water Department**

Mr. Iwanski reported that a citizens' committee-approved Brownfields list of 13 properties has been finalized and will go before the town council and Mayor next Monday, November 16, 2009, prior to beginning the Phase 1 environmental assessments. Mr. Iwanski advised the CAG that there have been seven Brownfields Community Advisory Committee meetings to date.

### **4. Technical Assistance Grants (TAGs) and Technical Assistance Services for Communities (TASC) information- Viola Cooper, EPA Community Involvement Coordinator (CIC)**

Ms. Cooper presented information on two funding programs offered through EPA, TAG and TASC.

**See TAG slide presentation below**

Ms. Cooper also announced EPA's relocation of the information repository for the site, and discussed revising the EPA mailing list and community involvement plan, coordinating an open house, and releasing a site fact sheet.

### **5. Call to the Public: None**

**The CAG took a 10-minute break.**

### **6. Acceptance and/or changes to minutes of August 6, 2009**

Ms. Kagan made a motion to accept the minutes as drafted. It was seconded by Ms. Holland. The minutes were approved unanimously by the CAG.

### **7. CAG membership discussion and voting- Felicia Calderon, ADEQ CIC**

Ms. Calderon reported that she had not received any applications for the CAG to vote on. It was decided by the CAG that they and Mr. Iwanski would submit potential CAG member applications to Ms. Calderon by January 15, 2010.

**8. Discussion of a PGA-South site tour at the Goodyear Airport facilities-Susan Kagan, Co-chair**

Ms. Calderon advised the CAG that Mr. Sussman communicated to her that a site tour of PGA South would be possible and asked her to solicit a couple of possible tour dates from them. The CAG decided that February 2<sup>nd</sup> or the 4<sup>th</sup> would be ideal, beginning at 10 a.m. Ms. Calderon advised the CAG that she would report back to Mr. Sussman these potential tour dates. Once a final tour date was determined she would communicate the date and time to the CAG.

Ms. Calderon advised the CAG of the WQARF 2009 Annual Registry Report that was electronically mailed to them. She discussed with them that each year ADEQ is required by statute to publish an annual registry report for all WQARF sites in Arizona that gives a brief description and status report for each site. This report is published in the Arizona Administrative Register with the Secretary of State. Ms. Calderon also brought copies of the report for the public attendees and encouraged all present to review this report at their leisure.

**9. Future meeting and agenda items discussion**

The next meeting was scheduled for Thursday, February 4, 2010 at the Goodyear City Hall, Room 117, 190 N. Litchfield, Goodyear, AZ. Suggested agenda topics for the next CAG meeting included: updates on PGA North, PGA South, and Western Avenue activities; Brownfields update; repository move update; TAG discussion and presentation by Mary Moore with the Lindon Park Neighborhood Association; and CAG membership discussion and voting.

**10. Adjournment**

Ms. Krone adjourned the meeting.

# Phoenix-Goodyear Airport-North (PGA-North) Superfund Site

**Kirk Craig, P.E.**

AMEC Geomatrix, Inc., Scottsdale, AZ



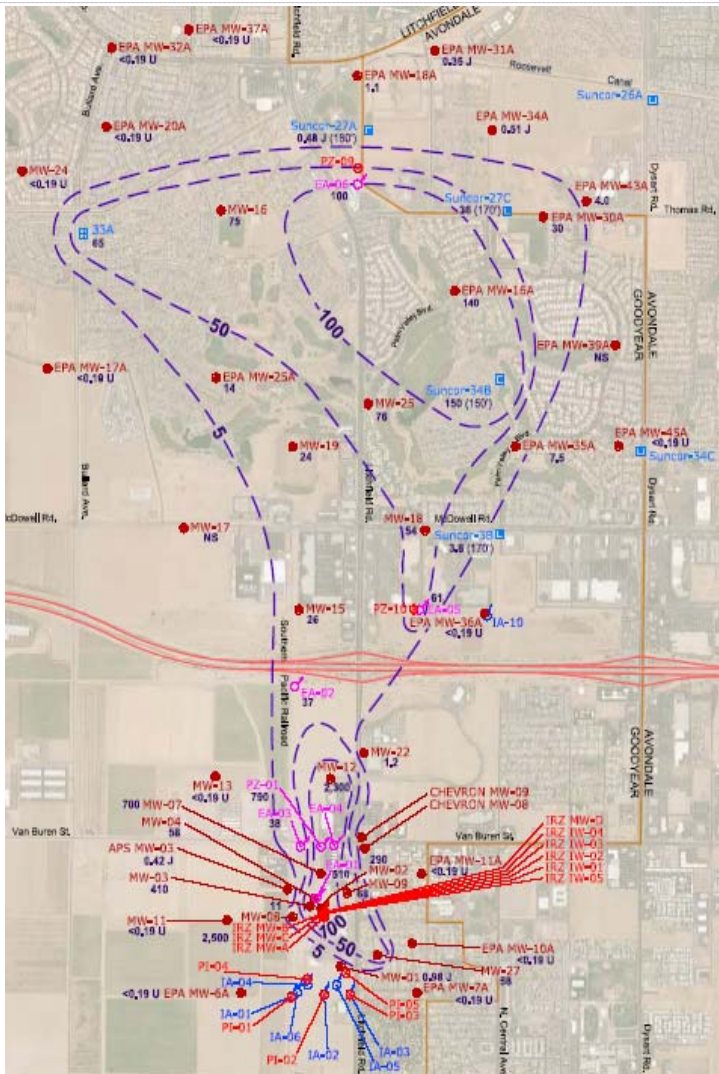
# Update for PGA-North



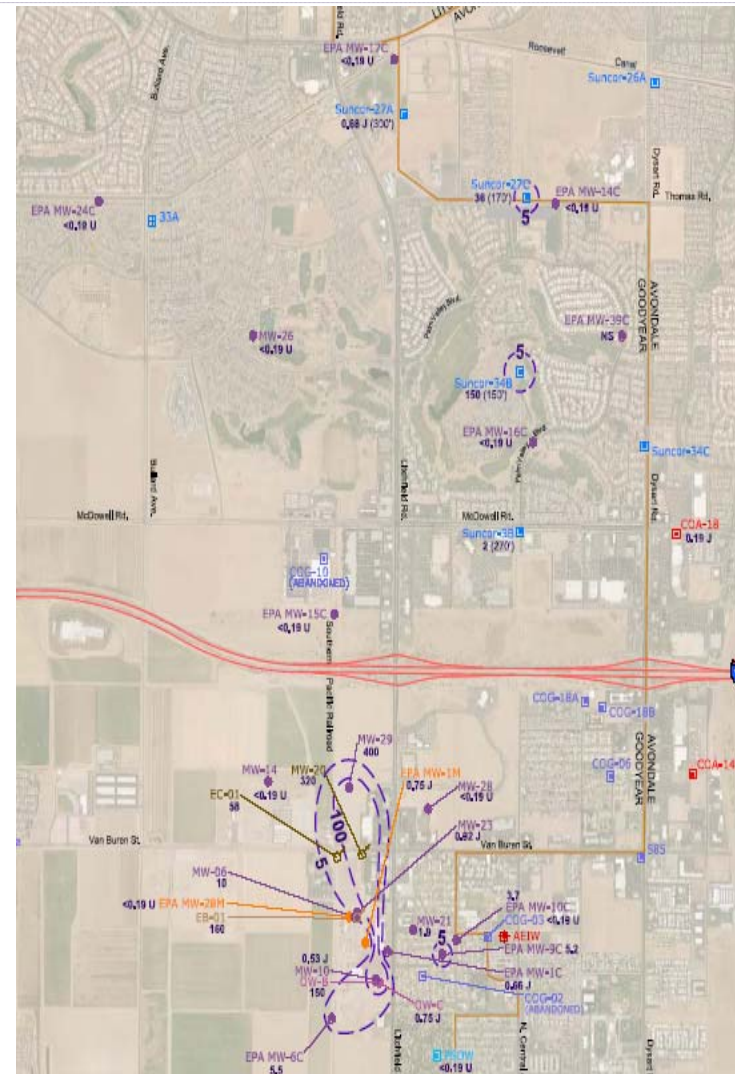
- The Groundwater Plume
- Groundwater Investigation
- Existing Treatment Systems and Soil Vapor Extraction System
- On-Site Revegetation
- Plan for Regional Treatment of Groundwater in the Northeast
- Innovative In-Situ Groundwater Treatment



# The Groundwater Plume Third Quarter 2009



Subunit A Aquifer TCE Plume

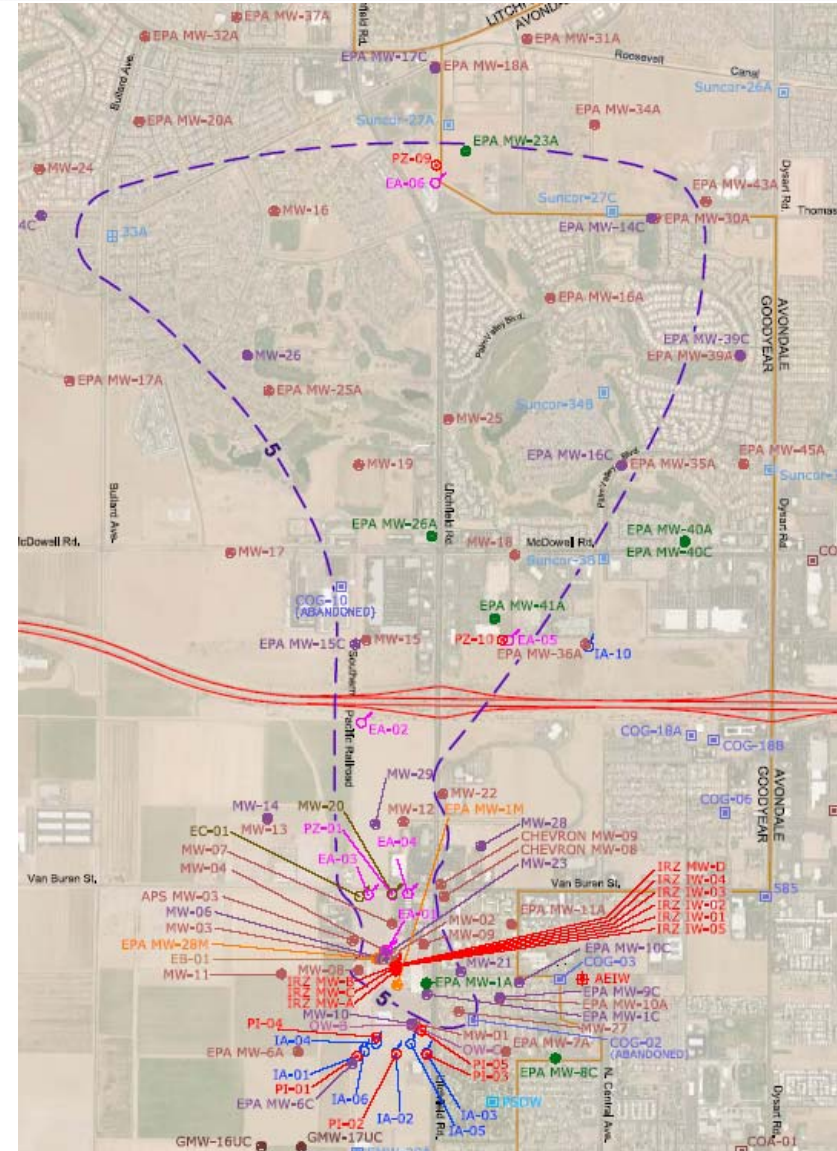


Subunit Aquifer C TCE Plume

# Groundwater Investigation



- Total Number of Groundwater Monitoring Locations to Date
  - 67 monitoring wells
  - 14 production wells
  - 10 remediation extraction wells
  - 1 golf course lake and waterfall

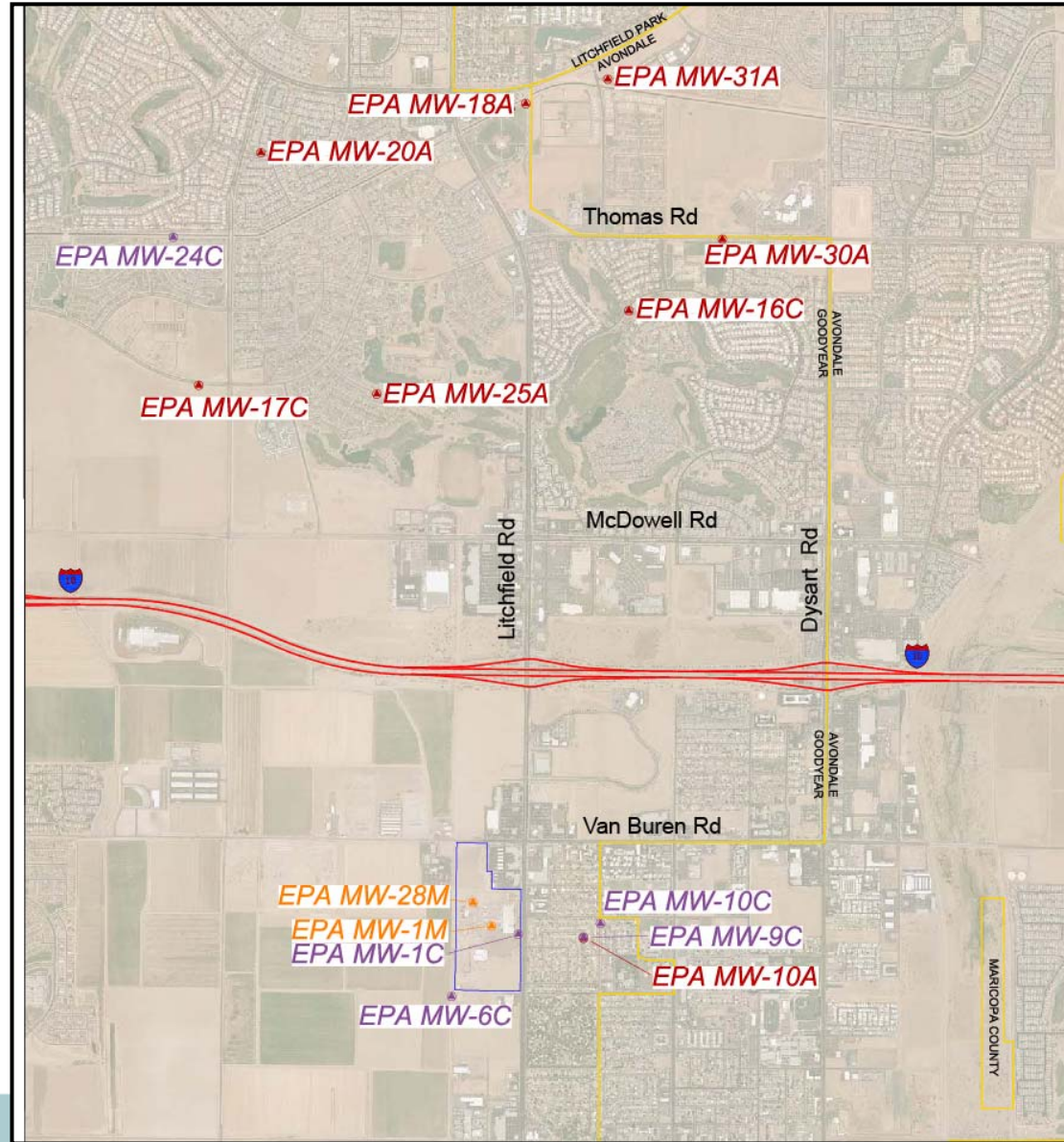


# Year One Wells



Year One of the  
Groundwater Investigation  
(Feb. 06 – Oct. 07)

15 Monitor Wells installed



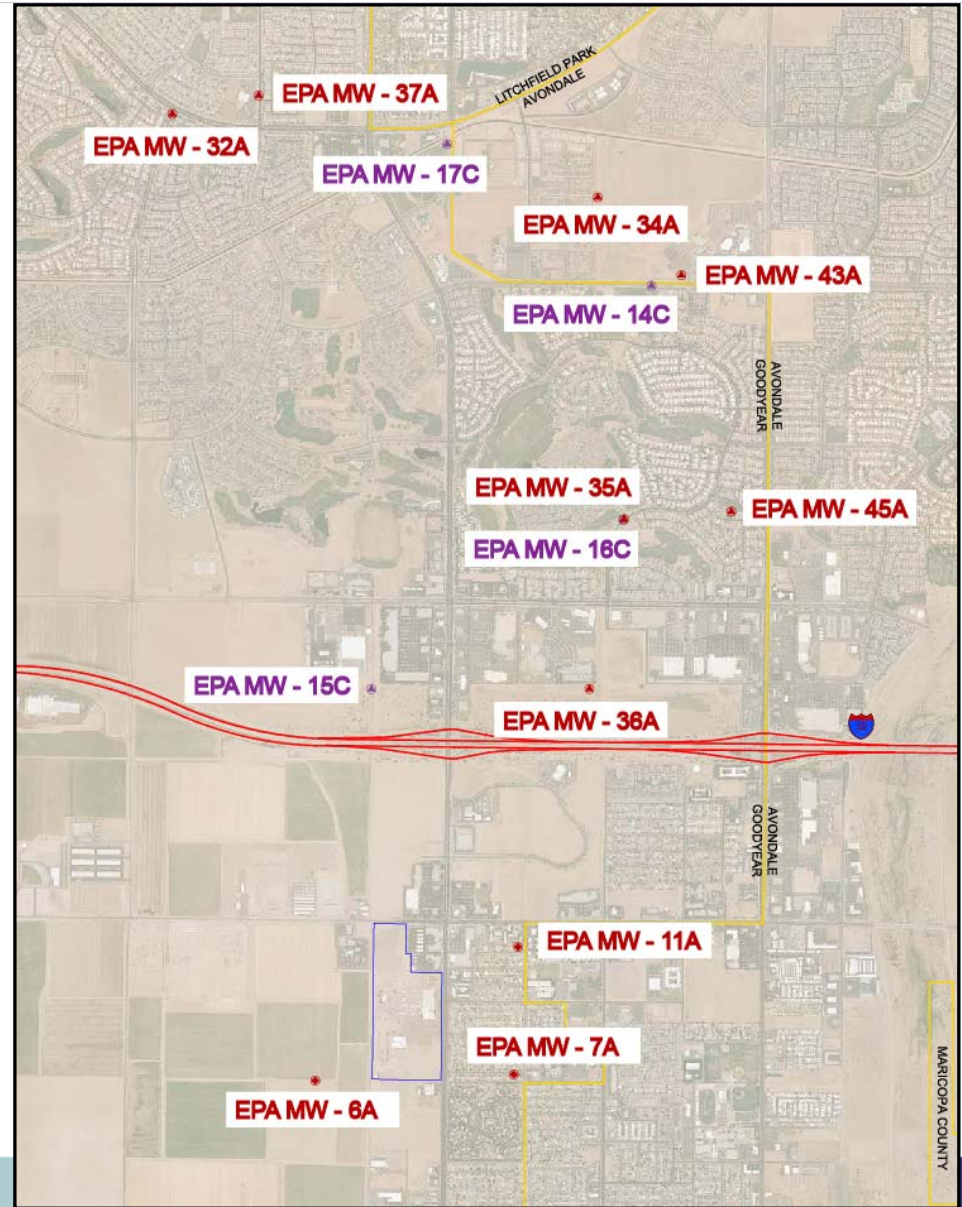


# Year Two Wells



Year Two of the  
Groundwater Investigation  
(Oct. 07 - April 09)

11 Monitor Wells installed



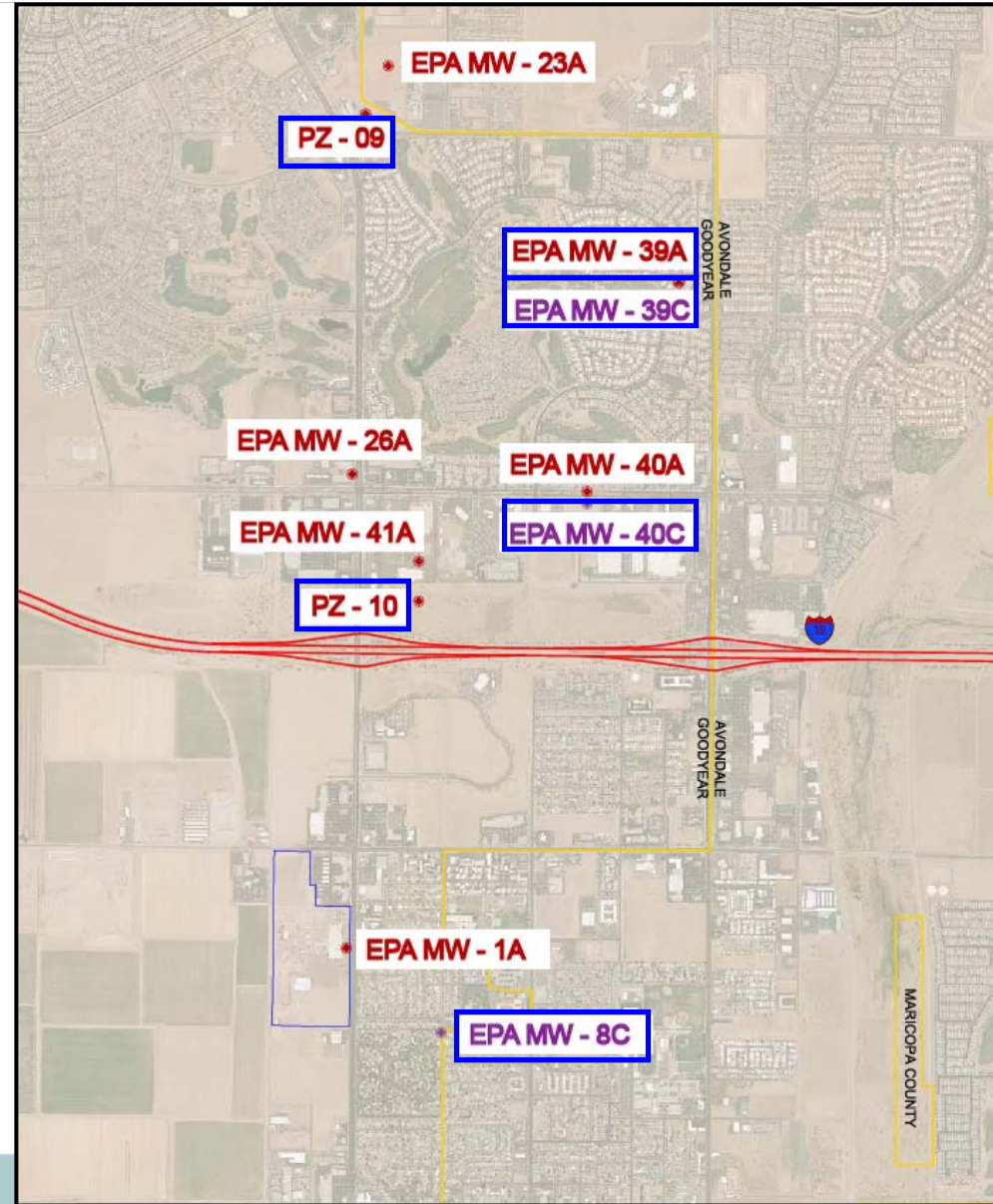
# Year Three Wells



Year Three of the  
Groundwater Investigation

11 Monitor Wells Anticipated

 - Well completed



# Groundwater Investigation Summary Drilling Activities



Air knifing the hole to 5 feet



Drilling



Pumping the new well



Pump rig for water removal

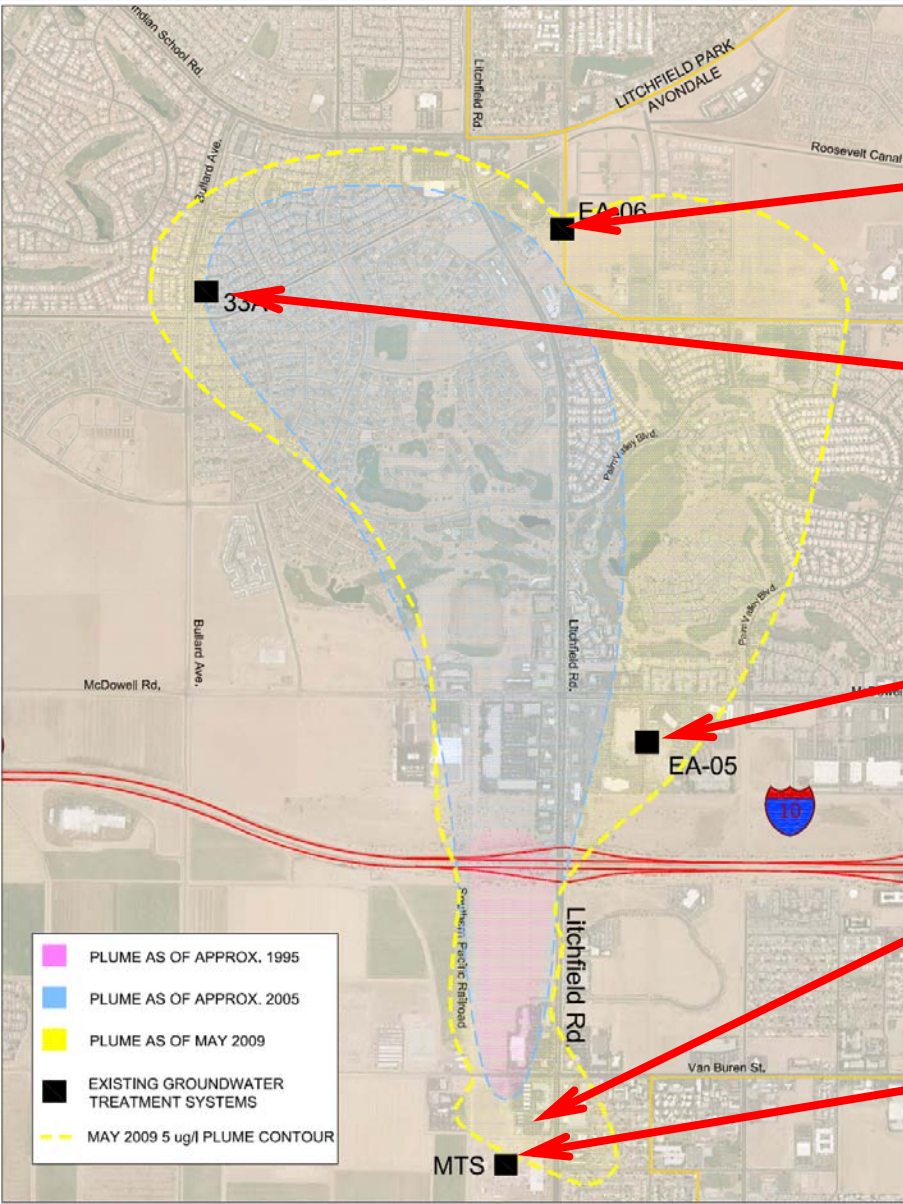


Depth specific sampling



Well Surveying

# Existing Treatment Systems



EA-06 Groundwater Treatment System

33A Groundwater Treatment System

EA-05 Groundwater Treatment System

Soil Vapor Extraction System

Main Groundwater Treatment System

# 2009 Treatment System Accomplishments



- 2009 Groundwater Volume Treated
  - 809,258,190 gallons
- 2009 Mass Removal
  - 812 Pounds TCE
- 2009 Treatment System Uptime
  - 90.3% (15,820 total system hours)

# 2009 Accomplishments



How much is  
809,000,000  
gallons of water ?

Enough to Cover  
an NFL Field over  
1,800 feet deep  
( $>1/3$  of a mile deep)



How much was  
721 pounds of  
TCE when  
released ?



Almost 60  
gallons



## Main Treatment System

- Built in 1994
- 7 Ext. Wells, 6 Inj. Wells
- 350 GPM
- Volume of Water Treated
  - > 1.6 billion gallons
- Mass Contaminant removed
  - ~ 28,646 pounds



## 33A

- Operating Since 1997
- 1 Ext Well, clean water to RID Canal
- 570 GPM
- Volume of Water Treated
  - > 4.7 Billion Gallons
- Mass Contaminant removed
  - ~ 7,827pounds





## EA-05

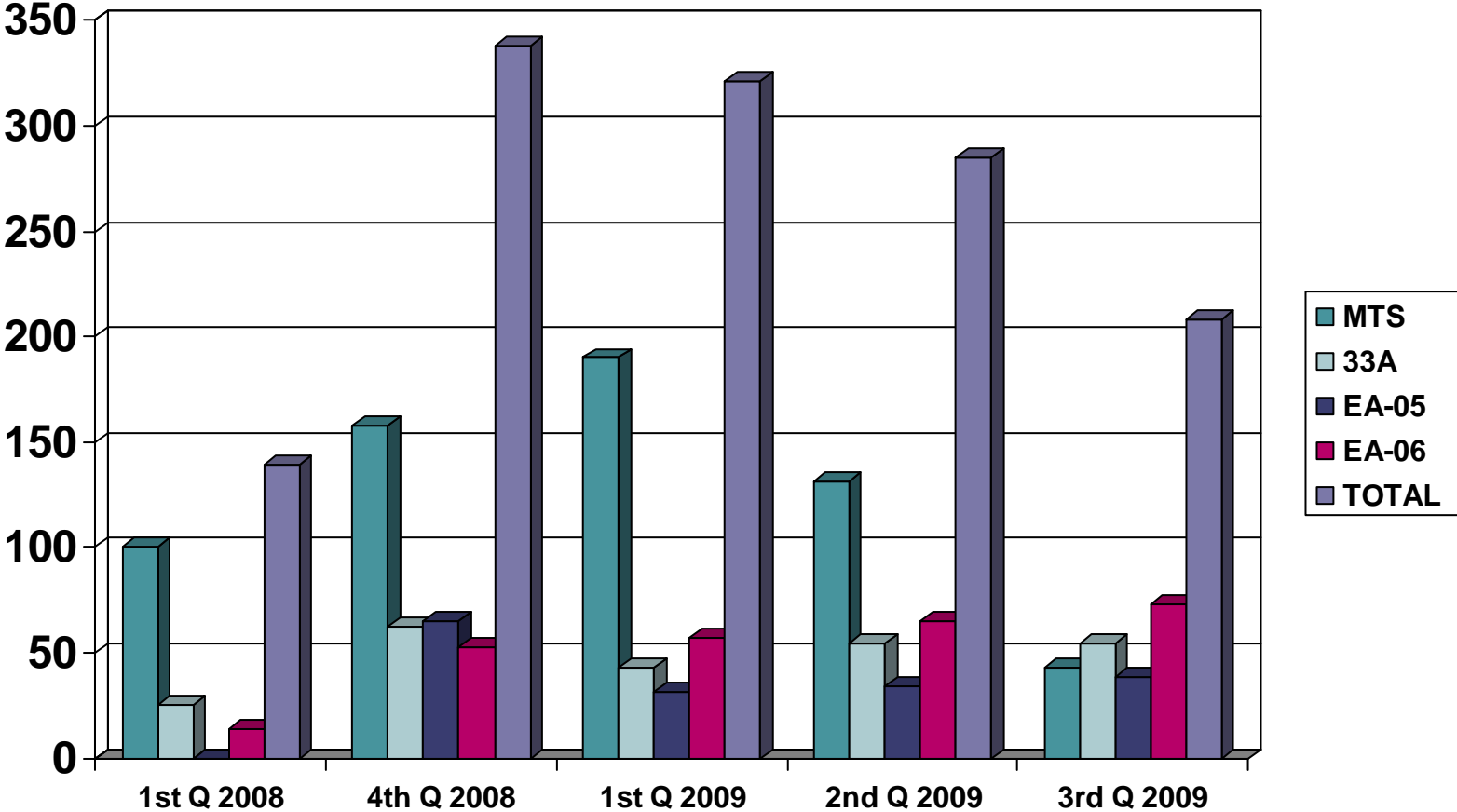
- Operating Since March 2008
- 1 Ext. Well, 1 Inj. Well
- 500 GPM
- Volume of Water Treated
  - ~200 million gallons
- Mass Contaminant removed
  - ~ 131 pounds



## EA-06

- Operating Since March 2007
- 1 Ext. Well, clean water to RID Canal
- ~430 GPM
- Volume of Water Treated
  - ~406 million gallons
- Mass Contaminant removed
  - ~ 361 pounds

# 2008 vs. 2009 Mass Removal Comparison



# SVE Accomplishments



2009 VOC Removal ~ 45 Pounds

2009 TCE Removal ~ 39 Pounds

2009 System Uptime ~ 93% (over 4,300 hours)



2004 – 2009 VOC Removal ~ 2,500 pounds

2004 – 2009 TCE Removal ~ 1,600 pounds

# SVE Accomplishments



How much was  
2,500 pounds  
of VOCs when  
released ?

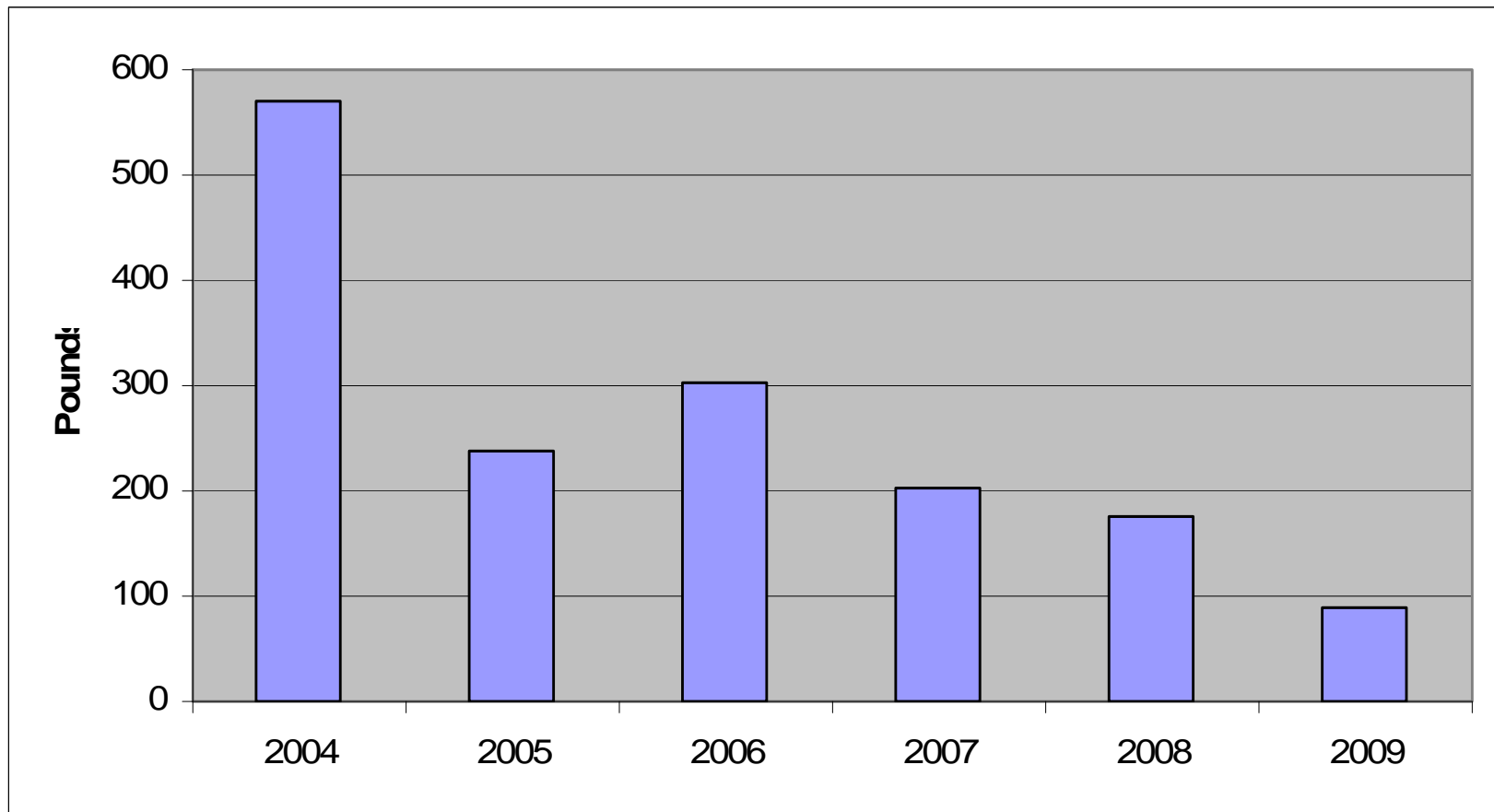
Over 200 Gallons



# SVE Pilot Testing Operations to Date



## Annual Mass Removal & 2009 Projections – TCE



## Beneficial Reuse/Recycling



MTS Water Used for Dust Control On-site

- ~984,000 gallons

MTS Water Used for Revegetation Pilot Test

- ~257,300 gallons
- Evaluating ability to use treated groundwater for irrigation
- 3 test “cells” growing Oat’s, Barley, and Rye Grass
- Improving Site Aesthetics



# Phased Regional Approach to Northeast Subunit A Plume

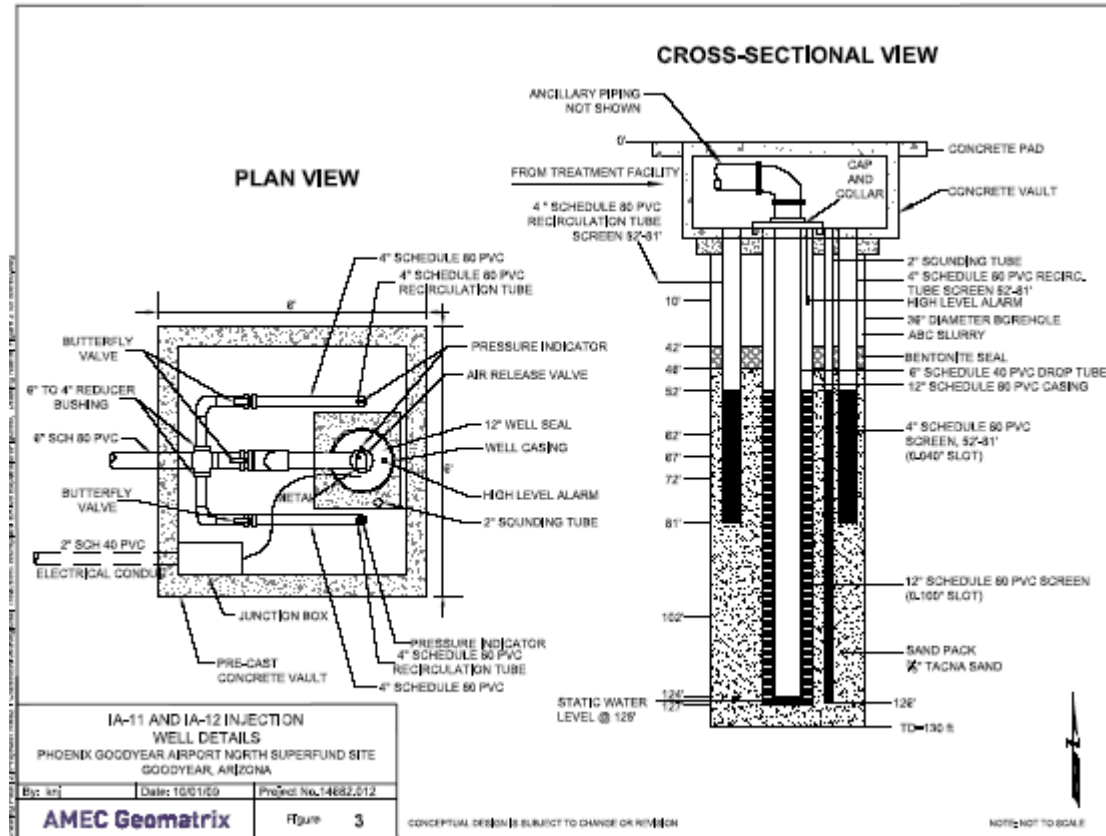


## Current NE Groundwater Extraction and Injection

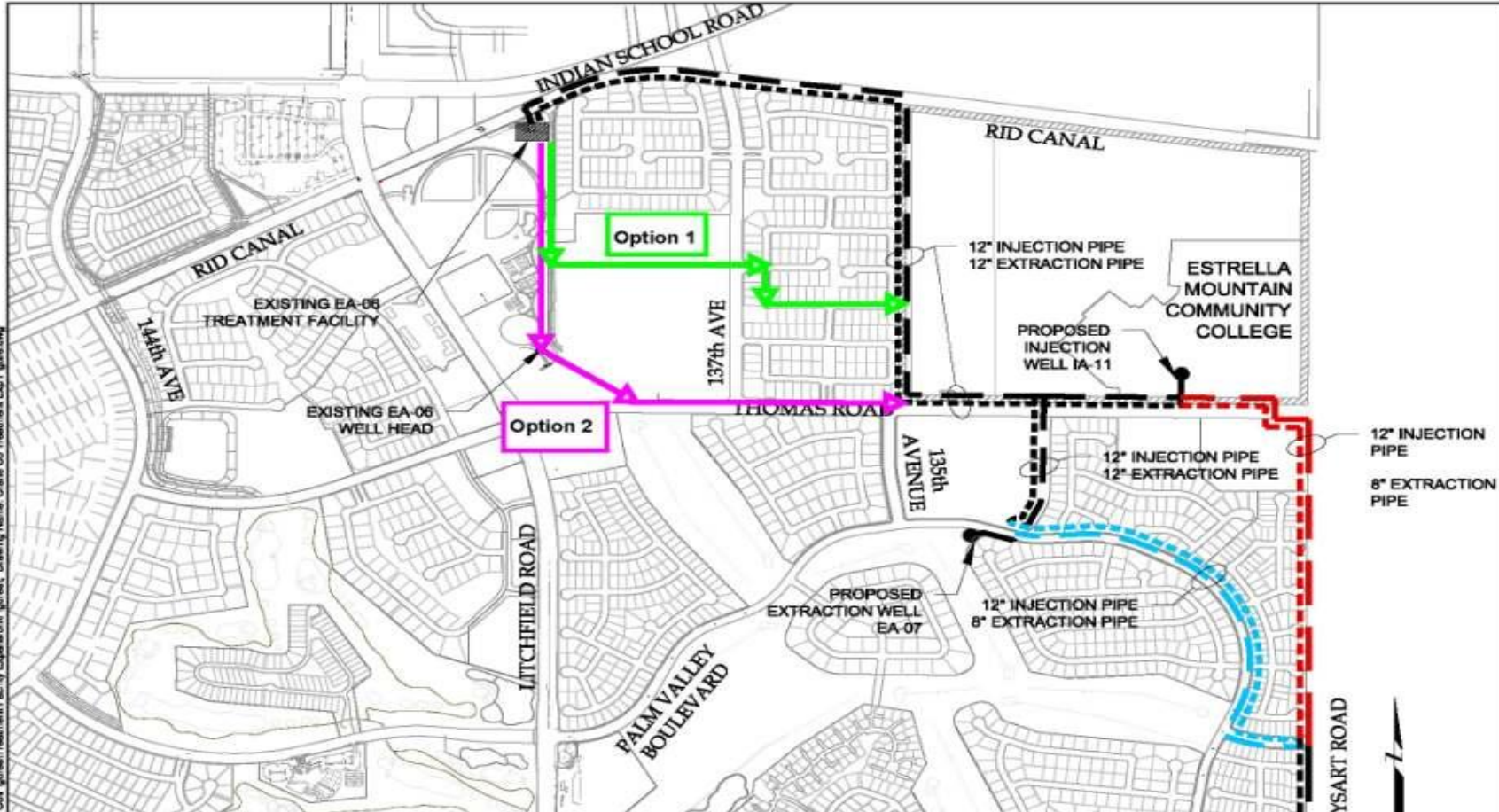
- Two Extraction Wells
  - EA-05 and EA-06
- One Injection Well
  - IA-10

## Proposed Future NE Groundwater Extraction and Injection

- Piping Route Alternatives and Proposed Injection Well Locations Plan submitted to EPA on October 2, 2009.
- Approved October 16, 2009
- Expedited installation requested.
- Design, permitting and procurement of access agreements now underway
- Anticipated completion mid 2010



# Approximate Locations for Proposed Extraction Well EA-07 and Injection Wells IA-11 and IA-12



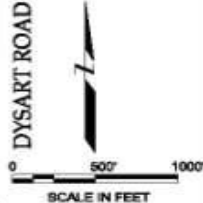
**PIPELINE ALIGNMENT ALTERNATIVES FOR EA-06 TREATMENT FACILITY EXPANSION**  
 PHOENIX GOODYEAR AIRPORT NORTH SUPERFUND SITE  
 GOODYEAR, ARIZONA

By: **ld** Date: 09/21/09 Project No. 14682.012

**AMEC Geomatrix**

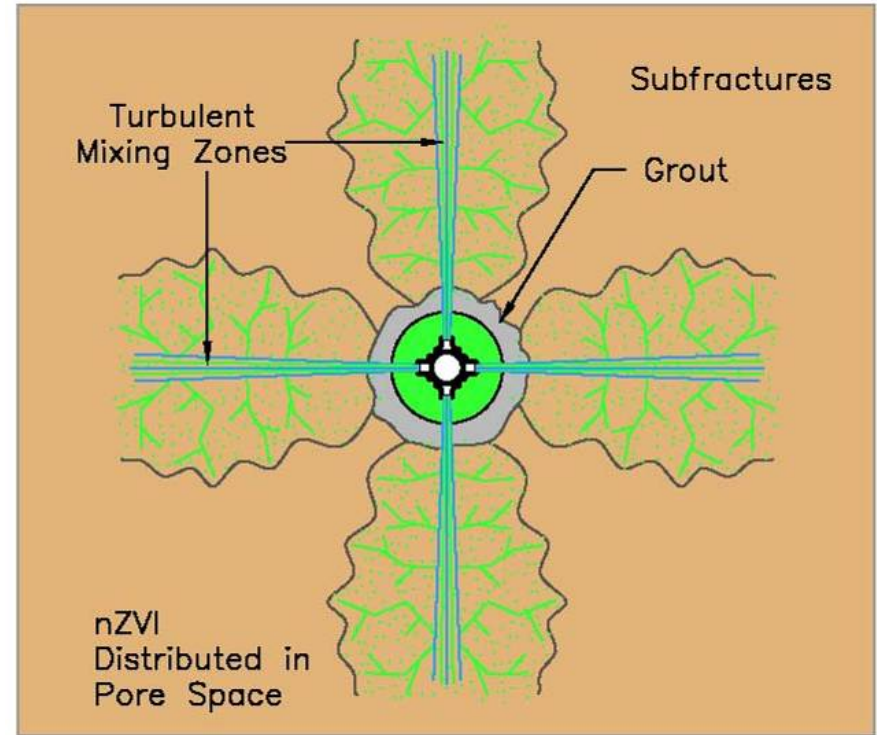
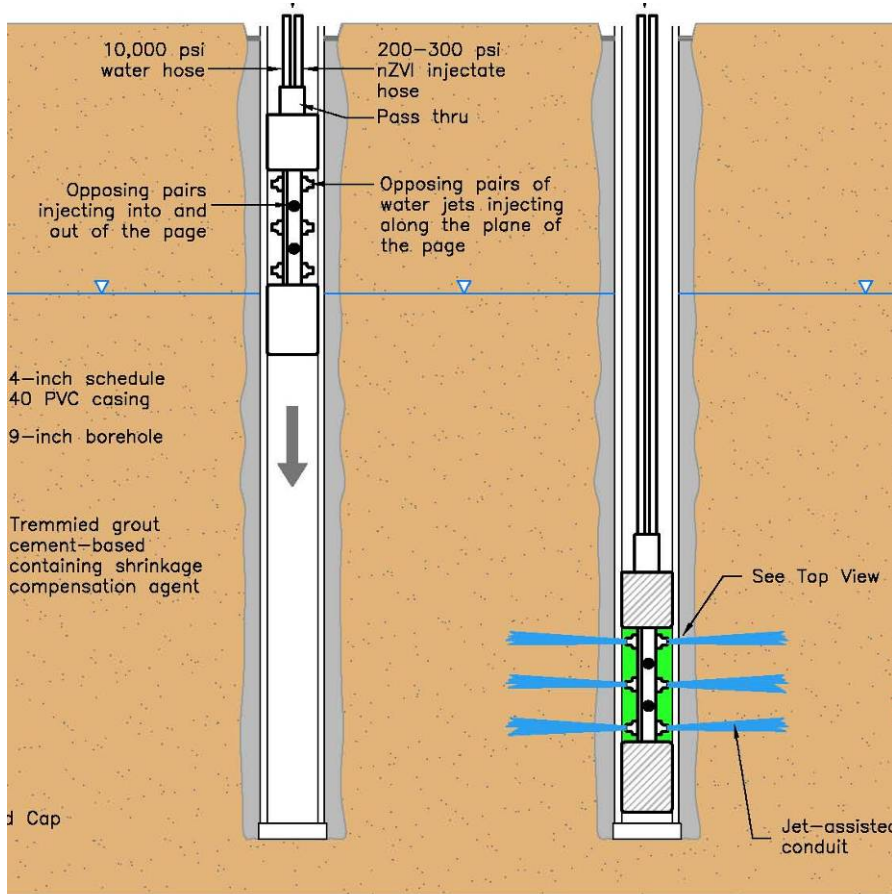
Figure **1**

LEGEND	
PROPOSED DUAL PIPELINE LOCATION	COMMON PRIMARY ALTERNATIVE
EXTRACTION PIPING	---
INJECTION PIPING	.....



Plot Date: 10/01/09 - 8:17am, Plotted by: LmbDesign  
 Drawing Path: N:\Geomatrix\Crane CoF\gmsel\Treatment Exp F.gms.dwg  
 Drawing Name: Crane Co Treatment Exp F.gms.dwg

# Innovative In-Situ Groundwater Treatment



Top View

Nano-scale zero valent iron chemically reduces contaminants to non-harmful compounds

Proposed Jet Assisted Injection Mixing and Fracture Formation

# Demolition – Complete!



# Questions?



# Technical Assistance Grant Program (TAG)



# Purpose

- Hire a technical advisor to interpret site-related technical information
- Promote public involvement in the decision-making process through information transfer and community outreach



# Conditions

- Up to \$50,000 grant
- Three year project period
- One grant per Superfund site (coalitions are encouraged where multiple groups are interested)
- A site that is listed or proposed for listing on the Superfund list
- Grant recipients must be non-profit





# Conditions

- Grant recipients must contribute or “match” 20% of federal funds through in-kind or cash
- Administrative costs must not exceed 20%
- Grant recipient must comply with certain state and federal rules
- Grant funds are disbursed using the reimbursement principle



# Eligible Activities

- Hire a technical advisor
- Hire a grant administrator
- Review site documents
- Produce and distribute fact sheets
- Hold community meetings
- Prepare comments to site information and proposed cleanup plans
- Develop public notices



# Eligible Groups

- Non-profit groups incorporated specifically to address issues at the site
- Existing non-profit groups that demonstrate a substantial history of involvement at the site
- Environmental or health advocacy groups that are active at the site
- Coalitions of the above groups
- Non-profit groups composed of citizen members of Restoration Advisory Boards



# Ineligible Groups

- Potentially Responsible Parties (PRPs)
- Restoration Advisory Boards (RABs)
- Groups established or sustained by PRPs or other ineligible groups
- Academic institutions
- Political subdivisions
- For-profit organizations or corporations
- Groups such as counties or cities
- National organizations



# Ineligible Activities

- Develop new site-related information
- Support legal actions in any way
- Pay staff salaries
- Political activity and lobbying
- Tuition for training, seminars or coursework
- Travel costs
- Epidemiological or health studies, including blood/urine testing
- Reopening final agency decision or conducting dispute resolution



# Contact Information

Viola Cooper

Community Involvement Coordinator  
US Environmental Protection Agency

(415) 972-3243

(800) 231-3075

[Cooper.viola@epa.gov](mailto:Cooper.viola@epa.gov)

