

OU #08-110

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

Thursday, February 7, 2008 at 6:30 p.m.  
Goodyear City Hall, Room 117  
190 N. Litchfield Road  
Goodyear, Arizona

### MINUTES

#### Members in Attendance:

Diane Krone  
Susan Kagan  
Brenda Holland  
Bob Smith  
David Foltz  
Frank Scott  
Thomas Jones

#### ADEQ Staff in Attendance:

Brian Stonebrink, Former PGA-South Project Mgr.  
Chris Gamache, New PGA-South Project Mgr.  
Bob Peeples, Hydrologist  
Cathy O'Connell, PGA-North Project Mgr.  
Samantha Roberts, Remedial Projects Section Mgr.  
Linda Mariner, Community Involvement Coordinator

#### EPA Staff in Attendance:

Glenn Bruch, PGA-North Hydrogeologist  
David Cooper, Community Involvement Coordinator

#### Others in Attendance:

Harry Brenton, ARCADIS  
Ron Clark, Goodyear Tire & Rubber Co.  
Win Colbert, Goodyear Tire & Rubber Co.  
David Iwanski, City of Goodyear  
Kevin Murdock, CH2M Hill  
Todd Struttman, LATA  
Jo Wang, TRC  
Teresa Harris, Geotrans  
James Moyer, Park Shadows Country Homes  
Adam Klawonn, Phoenix Magazine  
Diane Burnett  
Randy Clark

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

Ms. Diane Krone, CAG Co-chair, welcomed everyone and facilitated the meeting. CAG members and all meeting attendees introduced themselves. Ms. Krone made comments about the success of the EA-06 Treatment Facility Dedication Ceremony on January 24<sup>th</sup> and expressed her pleasure to be a part of that celebration and the progress made in remediating the PGA-North Site.

### 2. Update of PGA-North Activities – Harry Brenton, ARCADIS

Mr. Brenton introduced himself and began his presentation by reporting on the site's two treatment systems.

**See slide presentation below**

Ms. Holland asked how the nano-scale Zero Valent Iron (nZVI) that is used to treat the TCE is injected into the ground. Mr. Brenton explained that it will be mixed on the surface into a solution and then pumped into the ground through an injection well where it will disperse and reduce the TCE. At this time they are working on completing the initial pilot tests for this technology.

Ms. Krone asked where the treated water from the new EA-05 system will go, and Mr. Brenton answered that it would go back into the ground through an injection well. Mr. Smith asked where this EA-05 well would be located. Mr. Brenton stated that the well is currently being drilled at McDowell and Litchfield roads southeast of the movie theater on the north side of the flood basin and south of the hospital.

Ms. Holland asked about the detection of soil gas. Mr. Brenton explained that the soil vapor extraction wells act as vacuums that suck contaminated vapors from the soil and removes it from the soil.

Ms. Krone asked if anything unexpected was found in the investigation that was done before the buildings are demolished. Mr. Brenton said that nothing surprising was found in the five compounds that were found except the one occurrence of lead on surface soil that is not mobile. Mr. Smith asked what "ST-9" identified. Mr. Brenton stated that ST-9 referred to Sedimentation Tank 9 that was removed from the ground, and then soil samples were taken around the area. Ms. Krone asked if there was a timeframe for when the demolition would start. Mr. Brenton replied that he did not have a timetable at this time. Ms. Kagan asked if radon gas had been detected during the sampling, and Mr. Brenton explained that radon gas is not a contaminant of concern for this site, and therefore, no radon testing was done.

### **3. Update of PGA-South Activities – Ron Clark, Goodyear Tire & Rubber Company**

Mr. Clark reviewed the current activities in progress at the site.

**See slide presentation below**

Mr. Smith asked about the chromium beds. Mr. Clark explained that there was some chrome beds used for sludge drying that needed further investigation before closure can be reached.

### **4. Update of Western Avenue Status – Samantha Roberts, ADEQ**

Ms. Roberts explained that this site was one of two WQARF sites considered as a possible prototype for the delisting process. However, after the most recent sampling, delisting is on hold until further investigation to what caused an exceedance in one of the wells for TCE. Ms. Roberts then gave an update on the current sampling results for the site.

**See slide presentation below**

Ms. Krone asked if the 15 foot drop in the groundwater level was due to the drought. Ms. Roberts could not say for certain. Mr. Smith asked if there was any other source that could be adding contaminant to the area. Ms. Roberts stated that they found three dry cleaners that had operated in the past in the area, but no determination was made if any of them was the real source there. Mr. Smith also asked how deep the groundwater level was. It was thought to be about 90 feet in that area.

## **5. City of Goodyear (City) Report – David Iwanski, Water Resources Manager**

Mr. Iwanski thanked everyone that participated in the EA-06 Treatment System dedication. He stated that the City continues to work with ARCADIS in getting EA-05 up and operating. Mr. Iwanski assured the CAG that anytime there is water from extraction wells that is safe to use for appropriate beneficial end use, the City will use that remediated water instead of the potable water for development and industrial uses.

The Brownfield Citizen's Advisory Committee did not meet in December, but this month the first comprehensive inventory of sites for Brownfields development should be available.

## **6. Call to the Public**

Questions that were raised during this time included:

- *Randy Clark asked: Are the nano-scale Zero Valent Iron particles recognizable enough to detect their presence in wells where they are working on reducing the TCE?*

Mr. Brenton responded that by seeing the reduction in TCE in those wells, it would be clear that the Iron was working.

- *Diane Burnett asked: What is the end date for closure of the clean up for the PGA-North Site since several timeframes of 20 or 30 years has been indicated in the past?*

Mr. Bruch responded that it's very hard to calculate because it depends on how many extraction wells come on line and how well the nano-scale particles work at reducing the TCE.

- *Diane Burnett asked: Is there containment on the plume or is it still growing?*

Mr. Bruch responded that when EA-05 comes on line, EPA will feel that it is pretty well contained.

- *Diane Burnett asked: Are you convinced that enough is being done to clean up this site?*

Ms. Krone responded that as a CAG member from the beginning, she has seen a big change since EPA signed the consent decree with Crane Co. It appears that everyone is now on board with the work to aggressively remediate both sites as fast as possible. She said she feels much more encouraged with the innovative technologies being considered as well as the completed work activities. Mr. Iwanski agreed that by holding conferences like the EPA's Desert RAT last year, new technologies will continue to allow EPA to aggressively remediate this site.

- *Adam Klawonn asked: What is the greater concern regarding the groundwater in relation to this plume – for existing residents or for future developments that will require more wells pulling the plume in different directions?*

Mr. Iwanski responded that anything having to do with groundwater contamination is a serious matter for either existing residents or future development, and that it is the City's primary purpose to ensure that clean up is done in the most scientific and cost effective manner possible. And he reminded everyone that it was not just the City of Goodyear's wells that are at risk, but also the City of Avondale, Litchfield Park Service Company, and SunCor.

- *Adam Klawoon asked: Can you talk about the City's agreement for water use with Goodyear Tire and Rubber Co. and Crane Co.?*

Mr. Iwanski clarified that there is currently no agreement in place with Crane Co, but the City does have an agreement with the Goodyear Tire and Rubber Company to be able to take their treatment system's remediated groundwater and use it for other beneficial uses instead of just reinjecting it back to the ground. He explained that the City of Goodyear's mayor and council decide whether to utilize that water for cooling projects, landscape irrigation, dust control, or construction needs.

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

### **7. Acceptance and/or Changes to Minutes for the November 1, 2007 CAG Meeting**

Ms. Krone asked if anyone had any changes to the minutes. Ms. Kagan made a motion to accept the minutes and Mr. Smith seconded. The minutes were accepted.

### **8. Discussion of Potential Site Tour**

Ms. Holland made a motion to request a public site tour from the agencies of the Unidynamics site, and Mr. Scott seconded it. The vote was unanimous to ask the agencies to try to set up a “windshield drive-by” tour that would not violate any OSHA or Crane Co. safety requirements. Ms. O’Connell will work on finding out whether a site tour is possible and when.

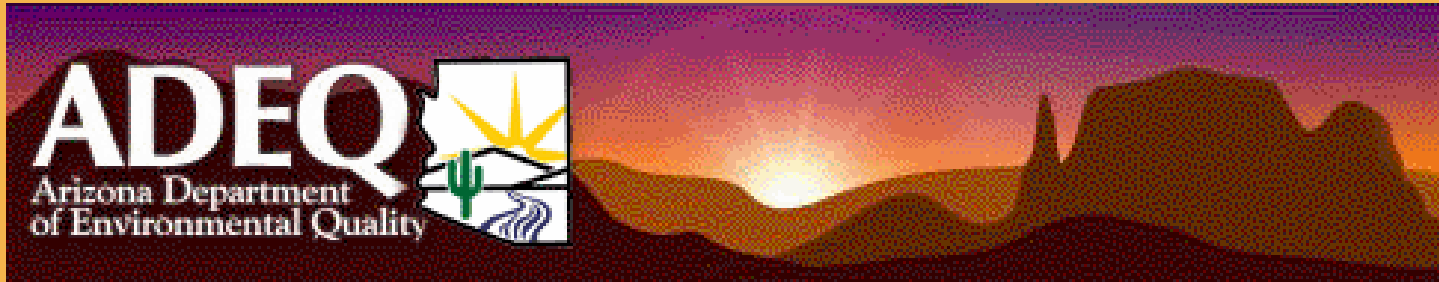
### **9. Next Meeting Date and Agenda Discussion**

The next meeting date was set for May 1, 2008 at the same location. Suggested agenda items for the next meeting included a synopsis of the EPA’s Desert RAT Conference (in layman’s terms) held in Phoenix in October 2007, an explanation of the hydrogeology of the PGA-South Site, update on PGA-North activities, update on PGA-South treatment system, and the City of Goodyear report, and new co-chair vote.

### **10. Adjournment**

Mr. Smith motioned to adjourn the meeting, and Ms. Holland seconded the motion. The CAG voted to adjourn until May’s meeting.

# WESTERN AVENUE WQARF SITE



# CURRENT SITE STATUS

- PCE level in monitor well MW-2 increased from 3  $\mu\text{g/L}$  in March 2007 to 12  $\mu\text{g/L}$  in August 2007.
- Prior to the August 2007 sampling results, the last exceedence of 5  $\mu\text{g/L}$  in MW-2 occurred in April 1999 (10 sampling events during this time period at or below 5  $\mu\text{g/L}$  PCE).
- The highest PCE level detected in MW-2 occurred in December 1996 (72  $\mu\text{g/L}$ ).
- The last PCE exceedence in any other well occurred in January 2005 in MW-1 (5.1  $\mu\text{g/L}$ ).
- Groundwater elevations decreased approximately 3 ft from the March 2007 sampling event and have decreased approximately 15 ft since 1996.
- Groundwater monitoring well network will be sampled again on February 13, 2008.

# CURRENT SITE STATUS (cont.)

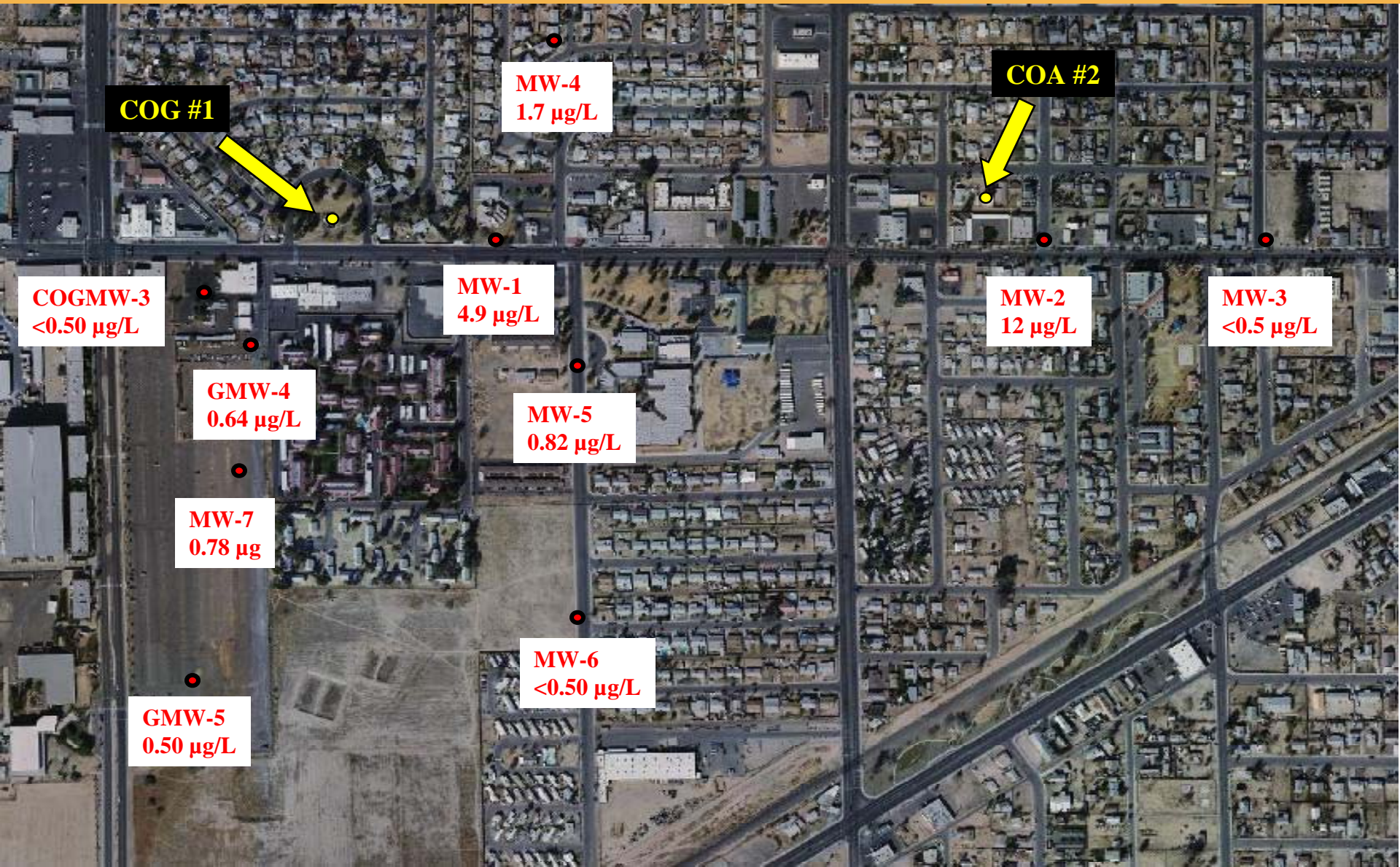
Western Avenue PCE  
concentrations as of March 2007:  
micrograms per liter ( $\mu\text{g/L}$ )

- MW-1: 4.3  $\mu\text{g/L}$
- MW-2: 3.0  $\mu\text{g/L}$
- MW-3:  $<1.0 \mu\text{g/L}$
- MW-4: 2.7  $\mu\text{g/L}$
- MW-5:  $<1.0 \mu\text{g/L}$
- MW-6:  $<1.0 \mu\text{g/L}$
- MW-7: 1.1  $\mu\text{g/L}$
- COGMW-3 :  $<1.0 \mu\text{g/L}$
- GMW-4:  $<1.0 \mu\text{g/L}$
- GMW-5:  $<1.0 \mu\text{g/L}$

Western Avenue PCE  
concentrations as of August 2007:  
micrograms per liter ( $\mu\text{g/L}$ )

- MW-1: 4.9  $\mu\text{g/L}$
- MW-2: 12.0  $\mu\text{g/L}$
- MW-3:  $<0.5 \mu\text{g/L}$
- MW-4: 1.7  $\mu\text{g/L}$
- MW-5: 0.82  $\mu\text{g/L}$
- MW-6:  $<0.5 \mu\text{g/L}$
- MW-7: 0.78  $\mu\text{g/L}$
- COGMW-3 :  $<0.5 \mu\text{g/L}$
- GMW-4: 0.64  $\mu\text{g/L}$
- GMW-5:  $<0.5 \mu\text{g/L}$

# AERIAL VIEW – WELL LOCATIONS





# Delisting Status

- ADEQ will be conducting another groundwater sampling event on February 13, 2008 and will determine the next course of action pending the results from this sampling event.

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Phoenix-Goodyear Airport-North  
(PGA-North) Superfund Site  
Update of Current and On-going Site  
Investigation & Remediation Activities

PGA-North Community Advisory  
Group Meeting

February 7, 2008



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# Agenda

- **Treatment Systems**
- Ongoing Groundwater Investigation
- Expansion of Treatment Systems
- Sealing Conduit Wells
- Additional On-Site Sampling
- On-Site Treatment of Contaminants

# Main Treatment System

- Six Extraction Wells
- Up to 465 GPM
- Operating Since 1994



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# Well 33A Treatment System

- One Extraction Well
- Up to 750 GPM
- Operating Since 1994



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# Treatment System Performance

- Main Treatment System
  - 2007 End of Year Totals
    - 145 Million Gallons of Groundwater Treated
    - 463 Pounds TCE Removed
    - 14 Pounds Perchlorate Removed
  - Totals Since 1994
    - 1.31 Billion Gallons of Groundwater Treated
    - 27,6759 Pounds TCE Removed
    - 80 Pounds Total Perchlorate Removed (Since 2005)



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# Treatment System Performance

- Well 33A Treatment System
  - 2007 End of Year Totals
    - 329 Million Gallons of Groundwater Treated
    - 222 Pounds TCE Removed
  - Totals Since 1994
    - 4.11 Billion Gallons of Groundwater Treated
    - 7,487 Pounds Total TCE Removed

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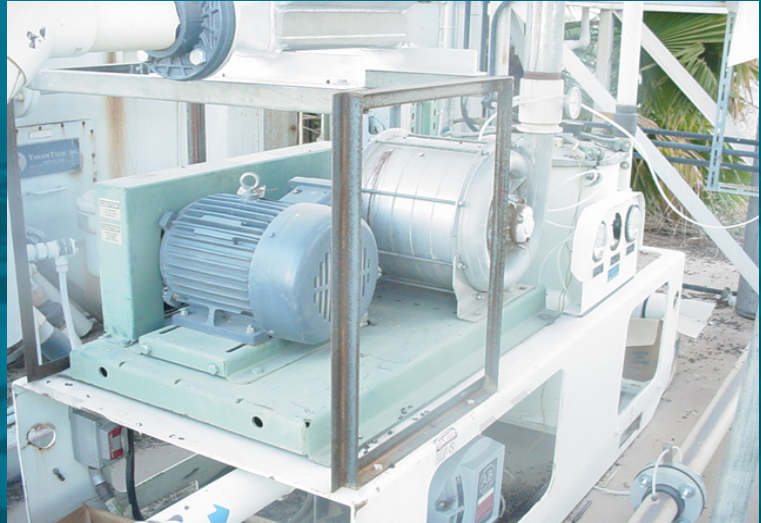
# Treatment Systems

- 2007 Main Treatment System Enhancements
  - Well EA-01 increased from 60 to 90 gpm (50%)
  - Subunit C Pumping
    - Operating Two Wells EC-01 and MW-20
    - Total of 210 gpm (350% Increase from 2006)
  - MTS operating at ~450 gpm, 50% increase from 2006
- 2007 33A Treatment System Enhancements
  - Increased pumping from 600 gpm to 750 gpm – an increase of 30%



# SVE System

- On UPI Site
- Used to Remove Contaminants from Soil
- Protects Groundwater
- Installed in 1996
- Restarted in 2004
- Carbon Filters for Off-Gas



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# SVE System Operation

- Mass Removal
  - 4<sup>th</sup> Quarter 2007
    - Total VOCs –59.3 pounds
    - TCE – 59.2 pounds
  - 1<sup>st</sup> Quarter 2008 Sampling in February
  - Since April 2004 Restart
    - Total VOCs – 2,266 pounds
    - TCE – 1,328 pounds
    - Acetone/Isopropanol – 938 pounds

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# Agenda

- Treatment Systems
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# On-Going Groundwater Investigation

- Work Completed To Date
  - Fifteen Monitor Wells Year 1 (Feb 2006 – Sep 2007)
    - According to USEPA Approved Work Plan
      - Two MAU Wells – 500+ Feet Deep
      - Five Subunit C Wells – 250+ Feet Deep
      - Eight Subunit A Wells – 150+ Feet Deep
  - Four Monitor Wells Year 2 (Oct 2007 – Dec 2007)
    - Three Subunit C wells -250+ Feet Deep
    - One Subunit A well – 150+ Feet Deep
- Year 2 Proposed Work
  - Eight Additional Wells Planned
    - Seven Subunit A Wells
    - One Subunit C Well
    - Completed by June 2008



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# Agenda

- Treatment Systems
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- On-Site Treatment of Contaminants

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# Expansion of Treatment Systems

- Crane Co. proposed two Extraction Wells in Late 2006 (EA-05 and EA-06)
  - Control Expansion of TCE Plume
  - Treatment of Groundwater
- EA-05 Located SE of at Litchfield Rd and McDowell Rd
- EA-06 Located at Goodyear Community Park





## Groundwater Treatment Systems

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# Expansion of Treatment Systems

- EA-06 Completed in December 2007
  - 16-inch Diameter Well
  - Total Depth 240 ft
  - Carbon Treatment = No Air Emissions
  - 2- 12,000 gal Carbon Vessels
  - Up to 1000 GPM Treatment Capacity
  - Currently Operational and Treating Groundwater



# EA-06 Extraction System Plan View



## EA-06 Well Compound



EA-06 Treatment  
System



# EA-06 Treatment System

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# Expansion of Treatment Systems

- System Performance
  - EA-06 Treatment System
    - December Totals
      - 2.6 Million Gallons Treated
      - 1.2 Pounds TCE Removed
    - January Totals
      - 5.7 Million Gallons Treated
      - 4.2 Pounds TCE Removed

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# Actions to Address Plume Expansion

- EA-05
  - Located Near McDowell & Litchfield Roads
  - Flood Control District of Maricopa County Basins
  - Carbon Treatment = No Air Emissions
  - Up to 500 GPM
  - Drilling started on January 24, 2008
  - Treatment system construction start on February 18, 2008
  - Treatment system operational on March 31, 2008

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# Expansion of Treatment Systems

- Actions to Address Plume Expansion
  - Following Start-up of EA-05 and EA-06 Treatment Systems;
    - Collect and evaluate pumping data.
    - Collect and evaluate monitor well data.
    - Evaluate results & install additional monitor wells as needed.

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# Agenda

- Treatment Systems
- Ongoing Groundwater Investigation
- Expansion of Treatment Systems
- **Sealing Conduit Wells**
- Additional On-Site Sampling
- On-Site Treatment of Contaminants



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# Sealing of Conduit Wells

- Hydrophysical Investigations/Well Abandonment
- Ongoing Program to Assess Conduit Wells
- Goal to Protect Deeper Groundwater
- Completed Activities
  - Hydrophysical Investigations SunCor wells 27A and 27C
    - Located north of Thomas Rd, east of Litchfield Rd.
    - Testing performed in August 2007
  - Abandonment of COG-04
    - Old Supply Well on UPI Site
    - Completed in December 2007
- Future Activities – Continue to Evaluate & Assess Potential Conduit Wells

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# Agenda

- Treatment Systems
- Ongoing Groundwater Investigation
- Expansion of Treatment Systems
- Sealing Conduit Wells
- **Additional On-Site Sampling**
- On-Site Treatment of Contaminants

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# Additional On-Site Sampling

- Source Areas, Soils and Facility Structures Investigation - Phase I
- Goal - to determine if other contamination is present
- Phase I Work Includes:
  - Over 100 soil borings
  - Over 200 soil samples
  - Excavation of below grade structures
- USEPA Approved Work Plan
- Phase I Work - May 2007 Thru Nov 2007



# Surface and Shallow Soil Investigation, Excavation Work



# Surface and Shallow Soil Investigation, Excavation Work



# Surface and Shallow Soil Investigation, Dry Wells (Rotasonic)



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# SASFS, Preliminary Results - Soil

249 Soil samples analyzed for 220 compounds including:

- VOCs
- SVOCs
- Metals
- Pesticides
- Herbicides
- Explosives
- Radioactive Materials
- Nitrate
- Perchlorate
- PCBs

## 5 Compounds Exceed Regulatory Limits:

- TCE (VOC) – one occurrence (ST-09)
- PCE (VOC) – one occurrence (ST-09)
- Lead (metal) – one occurrence (ST-09)
- Arsenic (metal) – naturally occurring concentrations
- Dieldrin (pesticide) – one occurrence

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# SASFS, Preliminary Results - GW

22 Soil samples analyzed for 220 compounds including:

- VOCs
- SVOCs
- Metals
- Pesticides
- Herbicides
- Explosives
- Radioactive Materials
- Nitrate
- Perchlorate
- PCBs

5 Compounds Exceed Regulatory Limits:

- TCE (VOC) – primary COC
- Perchlorate (salt) – primary COC
- Bis(2-ethylhexyl)phthalate (SVOC) – four occurrences
- Arsenic (metal) – naturally occurring concentrations
- Selenium (metal) – two occurrences





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# Additional On-Site Sampling

- Building Decontamination Sep 2007 thru Nov 2007
- Phase I Report and Phase II Work plan Submitted January 25, 2008
  - Phase II Work to include
  - Additional soil borings and sampling
  - Investigation beneath structures
- Soil Gas Investigation
  - Investigate potential other sources of contamination
  - Work Plan to USEPA on March 30, 2008

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# Agenda

- Treatment Systems
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# On-Site Treatment of Contaminants

- Crane Co. Evaluating In-Situ Treatment of TCE in Source Zones
- Use of nano-scale Zero Valent Iron (nZVI)
- Chemically Reduces TCE to Non-Harmful Compounds
- Selected for Analysis due to Rapid Treatment
- Tracer Testing On-going
- Crane Co. & USEPA will be evaluating other proven technologies on a case by case basis in the future.



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The End



# Phoenix-Goodyear Airport-South Project Site Status Report

Community Advisory Group  
Meeting February 7, 2008



# Agenda

- Review current activities
- Update status of ongoing cleanup
- Plans for Next 12 Months

# Review of Current Activities

- GAC #4 Status
- Additional delineation of Northern Subunit C plume
- Subunit C Injection Well Workovers
- System Upgrade: Acid Tanks
- Confirmation sampling of former Chromium drying beds

# GAC-4 Prior to Hydro-Testing





# GAC-4 Prior to Hydro-Testing



# GAC-4 Hydro-Testing



**Portion of  
Building  
Removed to  
Access Well**

**Building Prior to Well Testing**

# GAC-4 Hydro-Testing



Remove Wooden Portion of Building and Set Up Drill Rig

# GAC-4 Hydro-Testing



Motor Has Been Removed

# GAC-4 Hydro-Testing



Removing Pump Column Pipe

# GAC-4 Hydro-Testing



Removing  
Pump  
Column  
Pipe



# Injection Well Workover





# I-203 Workover



# I-203 Workover



Preparing to Rehabilitate Well

# Former 8000 Gallon Tank



Acid Used as part of Subunit A Treatment System

# Removing Former Acid Tank



# Laying New Floor



# Place Concrete



# New Concrete Floor



# New Double-Contained Acid Tank





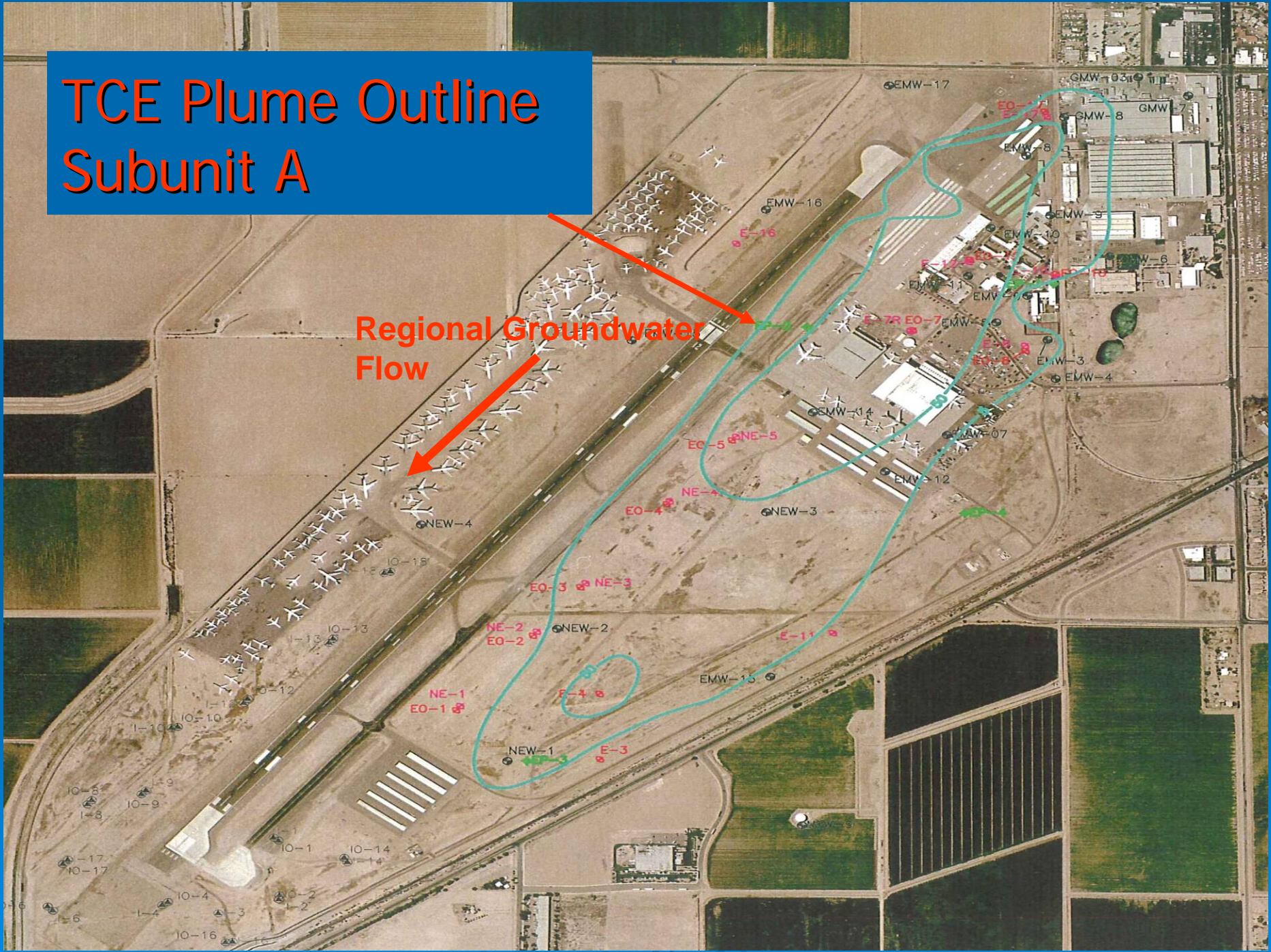
# Status of Ongoing Cleanup

# Subunit A Air Stripper System



# TCE Plume Outline Subunit A

Regional Groundwater Flow





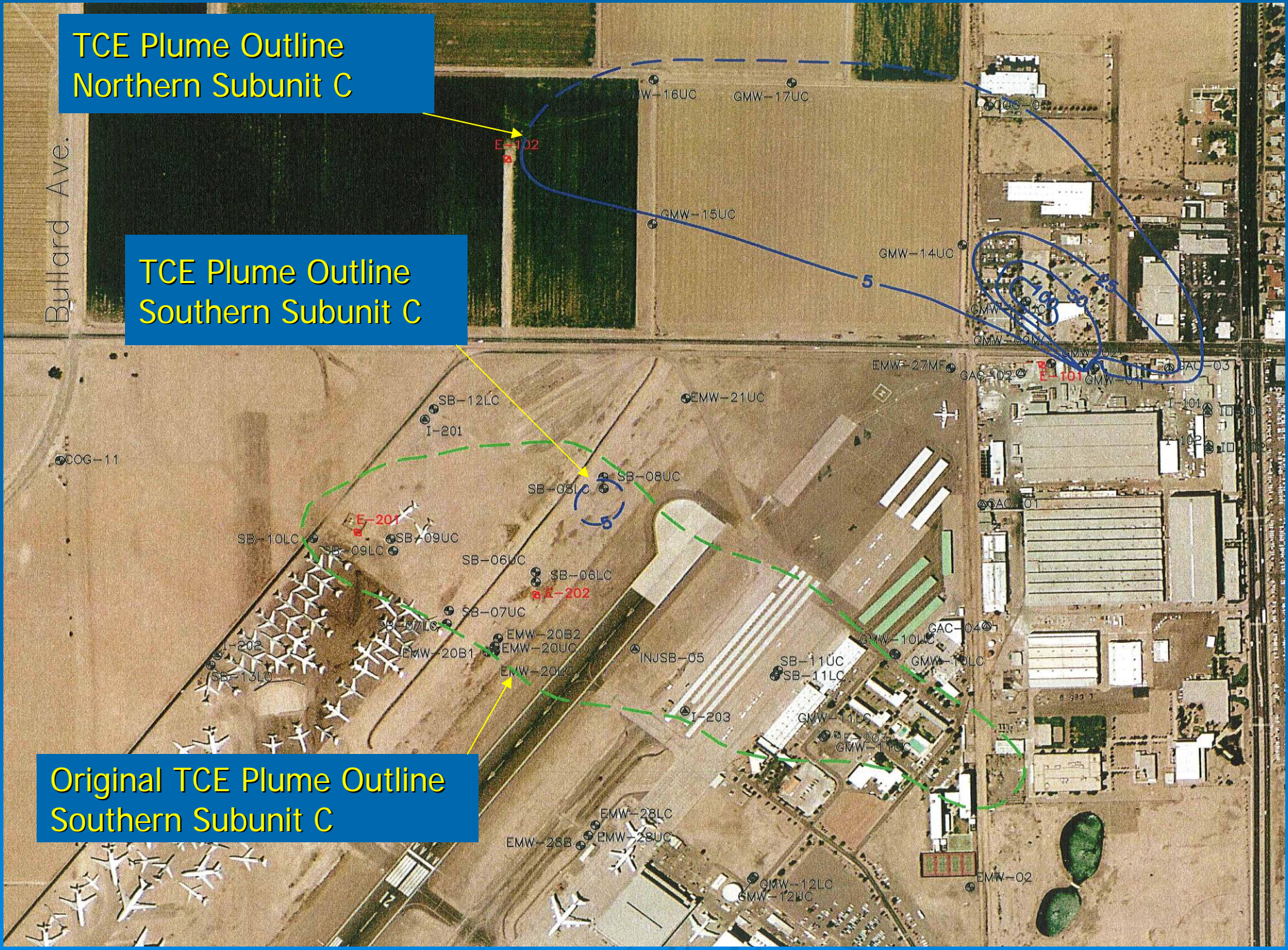
# Subunit C System



TCE Plume Outline  
Northern Subunit C

TCE Plume Outline  
Southern Subunit C

Original TCE Plume Outline  
Southern Subunit C



# Ongoing Cleanup Performance

1/1/07 – 12/31/07

<u>Plume</u>	TCE Removed*	% Uptime*
Subunit A	109 lbs	99%
Southern Subunit C**	0.7 lbs	99%
Northern Subunit C**	7.3 lbs	99%

\*TCE Removed and % Uptime is for 2007

\*\* Northern and Southern plume treated at a common system

# Status of On Going Cleanup

<u>Plume</u>	<u>TCE Removed*</u>	<u>% complete</u>
Subunit A	5,237 lbs	~87%
Southern Subunit C	174 lbs	~95%
Northern Subunit C	46 lbs	~29%

\*Mass removal through December 31, 2007

# Status of Five-Year Review Tasks

- Screening Level Ecological Risk Assessment (SLERA) Work Plan in review by EPA/ADEQ January
- Supplemental Sampling Plan for SLERA to EPA/ADEQ January
- Chromium drying bed study approved: conduct field effort concurrent with SLERA
- Vapor intrusion work plan being prepared



# Status of Other Near-Term Tasks

- Conducted GAC #4 hydrophysical testing January 2008
- Conducted Subunit C injection well redevelopment January 2008
- Updated existing Comprehensive GW Monitoring Plan
- Upgraded acid storage tank system January 2008

# Upcoming Project Milestones

- Implement Subunit C Well Work Plan
- Bench-scale tests to support FS – March 2008
- Obtain access for offsite wells – March 2008
- Install North Subunit C Wells – May 2008
- Complete chromium bed studies – April 2008
- Draft FS to Regulatory Review – June 2008