



# **Western Avenue/Phoenix-Goodyear Airport Community Advisory Group Meeting Agencies' PGA Presentation**

Goodyear, AZ  
August 8, 2013



# Phoenix-Goodyear Airport Site Update Agenda

- Current Trend Analysis/Groundwater Statistics – N & S
- Recent Activities – North and South
- Source Area Investigations to Date - North
- Proposed Plan - North
- Plans for Next Quarter –North and South

# Trend Analysis & GW Statistics: PGA-North

## COG-03 Area

- EPA MW-58A
- EPA MW-7A
- EPA MW-10A
- EPA MW-10C
- EPA MW-2C

## NW Area

- EPA MW-50A
- EPA MW-51A

## On Site

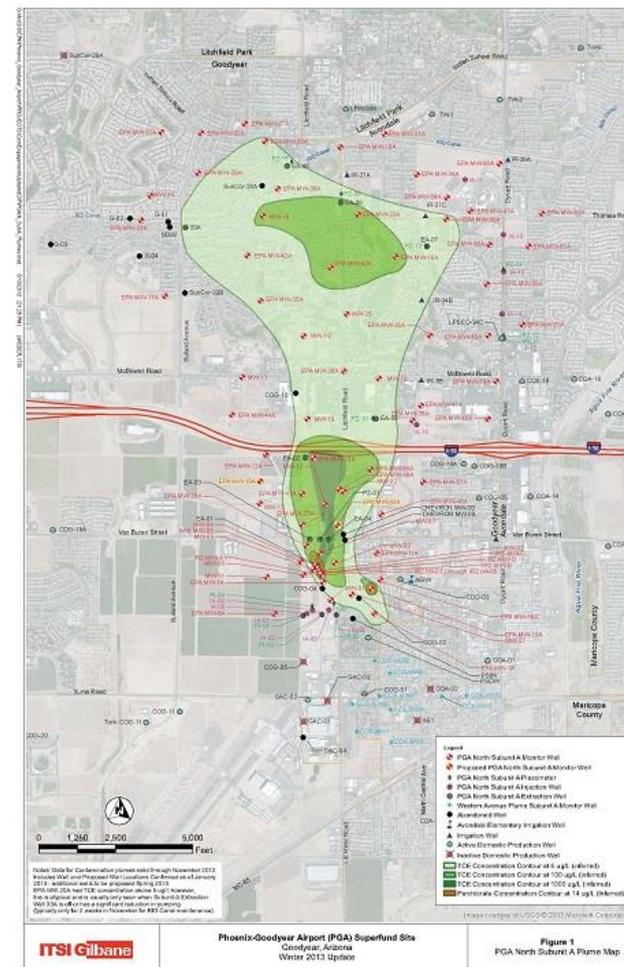
- MW-08

## North Central Plume

- MW-16
- EPA MW-38A

## NE Area

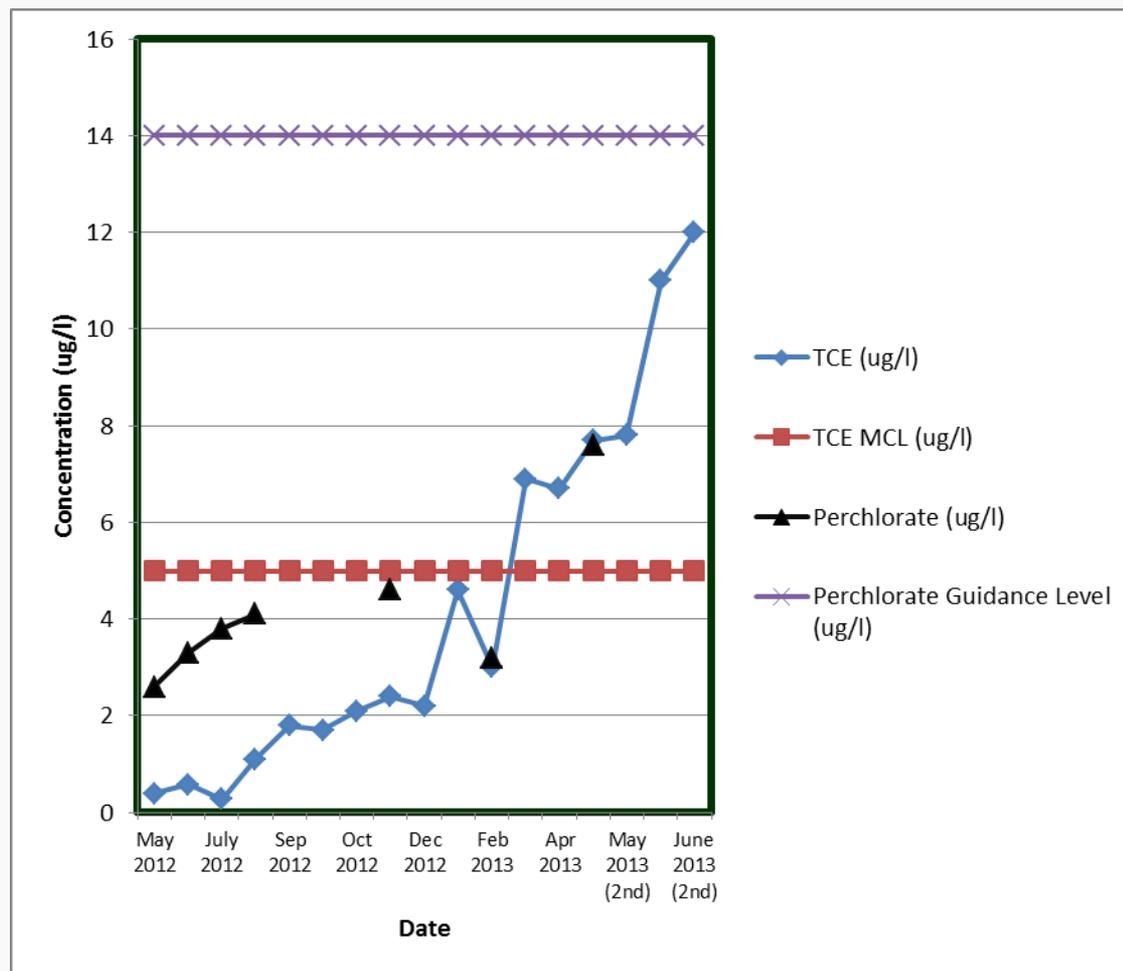
- EPA MW-30A
- EPA MW-43A
- EPA MW-54A
- EPA MW-35A



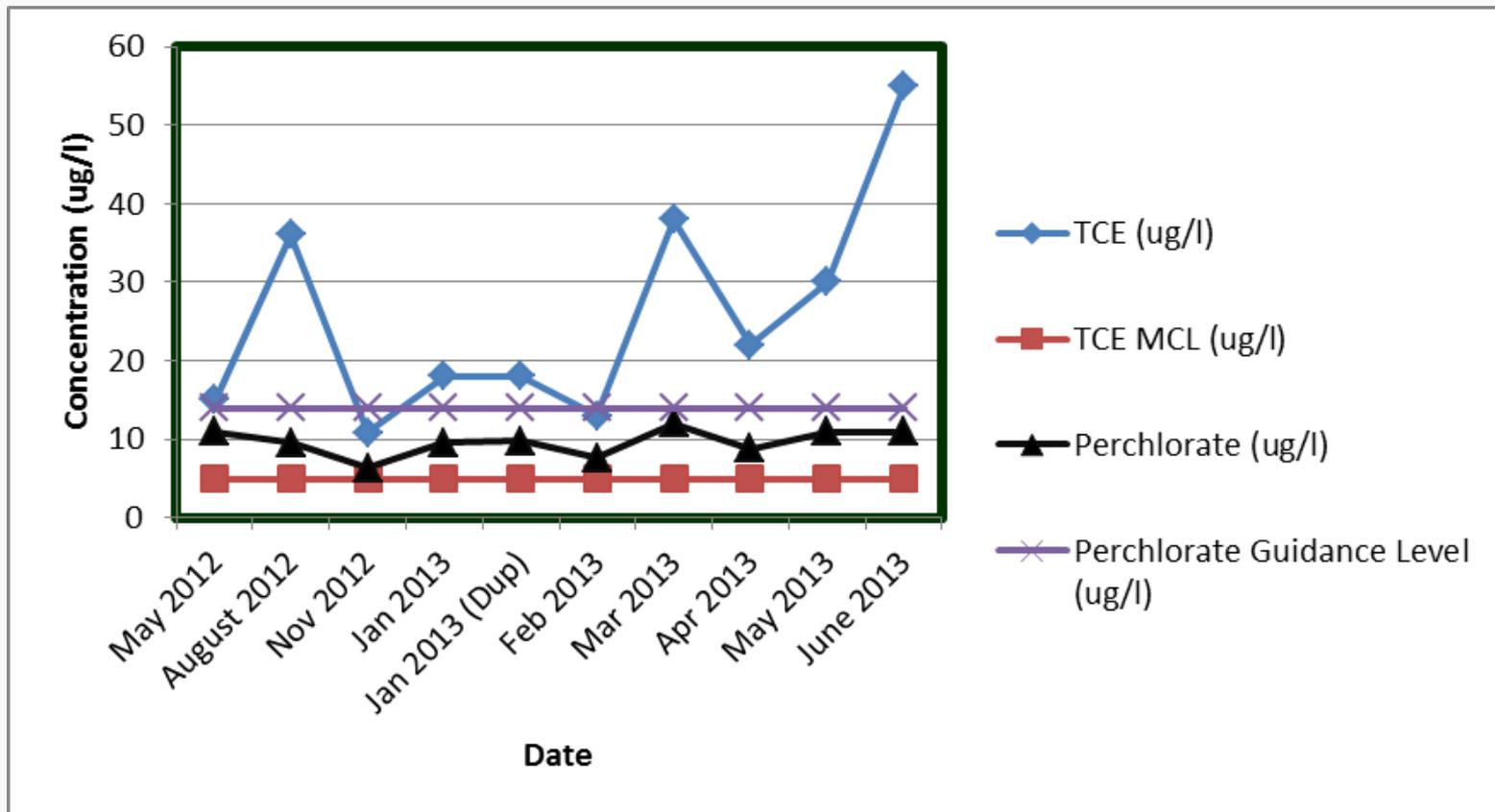


# COG-03 Area: EPA MW-58A (May 2012 – June 2013)

*Subunit A Sentinel Monitor  
Well for COG-03*

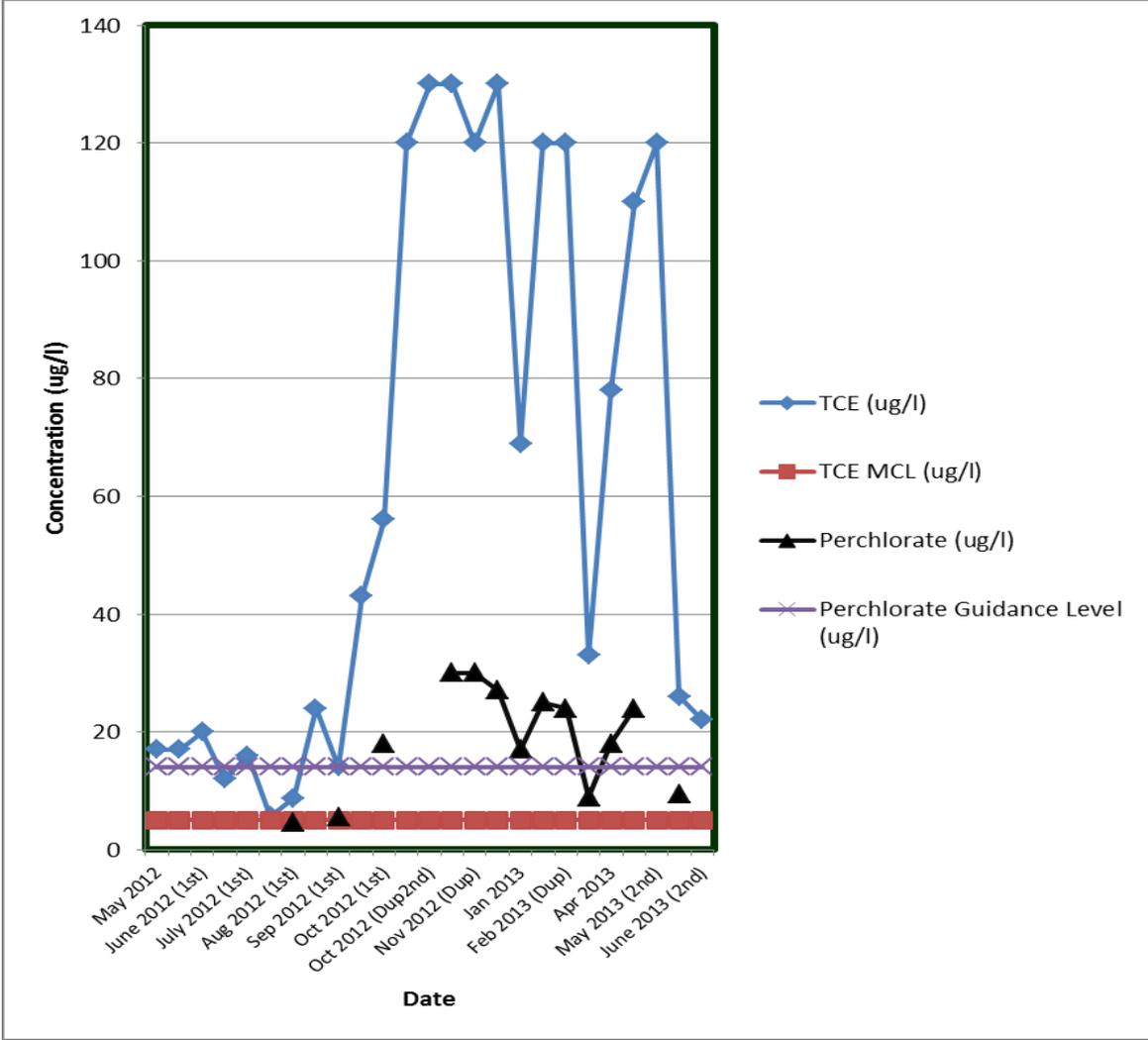


# COG-03 Area: EPA MW-7A (May 2012 – June 2013)

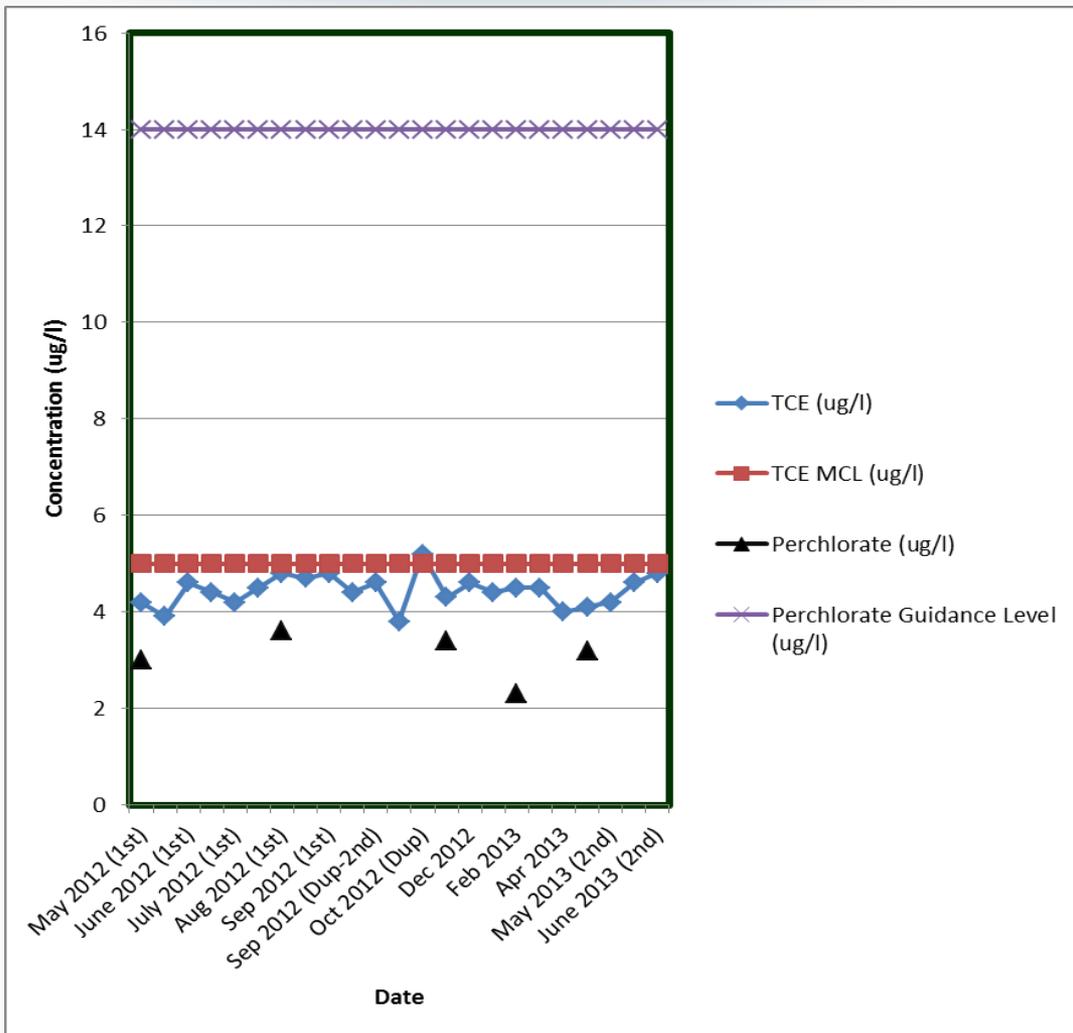


# COG-03 Area: EPA MW-10A (May 2012 – June 2013)

*Subunit A Sentinel Monitor  
Well for COG-03*

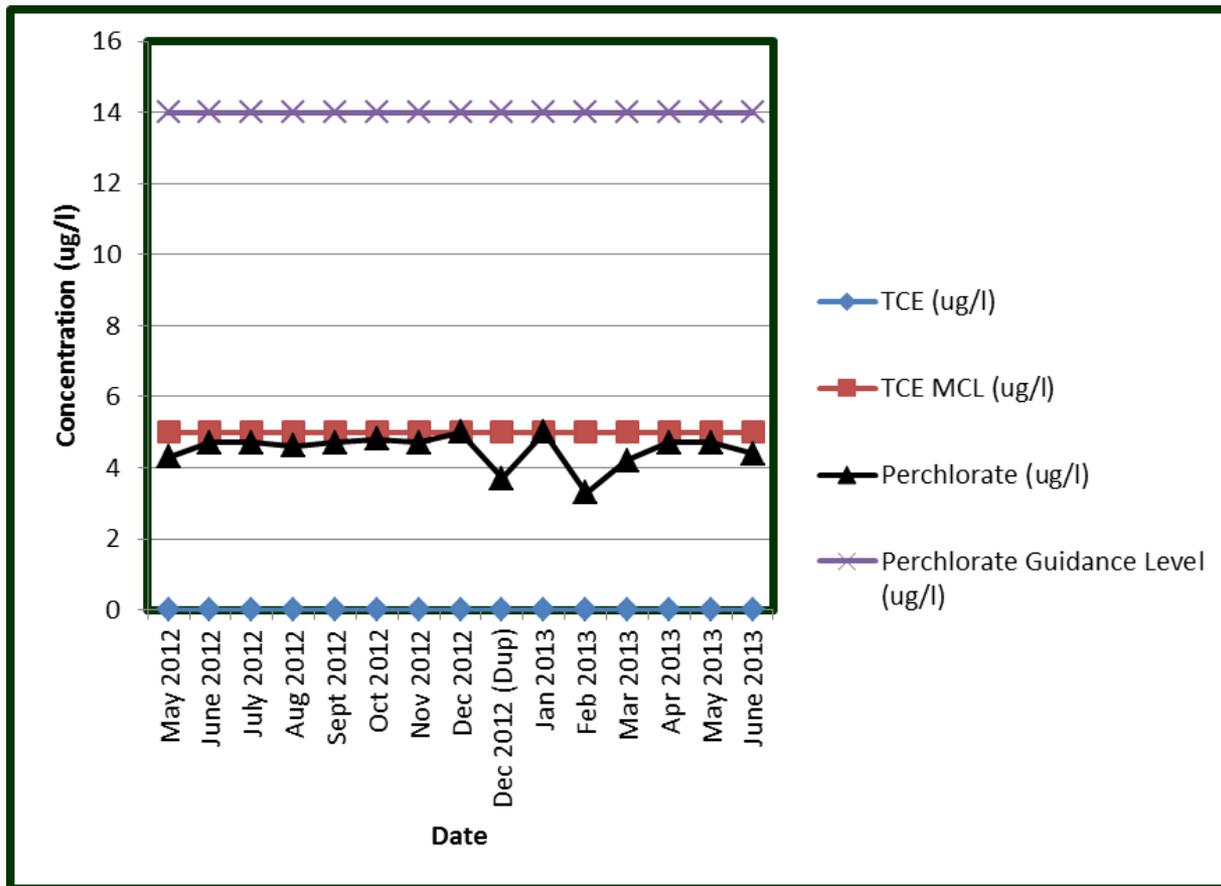


# COG-03 Area: EPA MW-10C (May 2012 – June 2013)



**Subunit C Sentinel  
Monitor Well for  
COG-03**

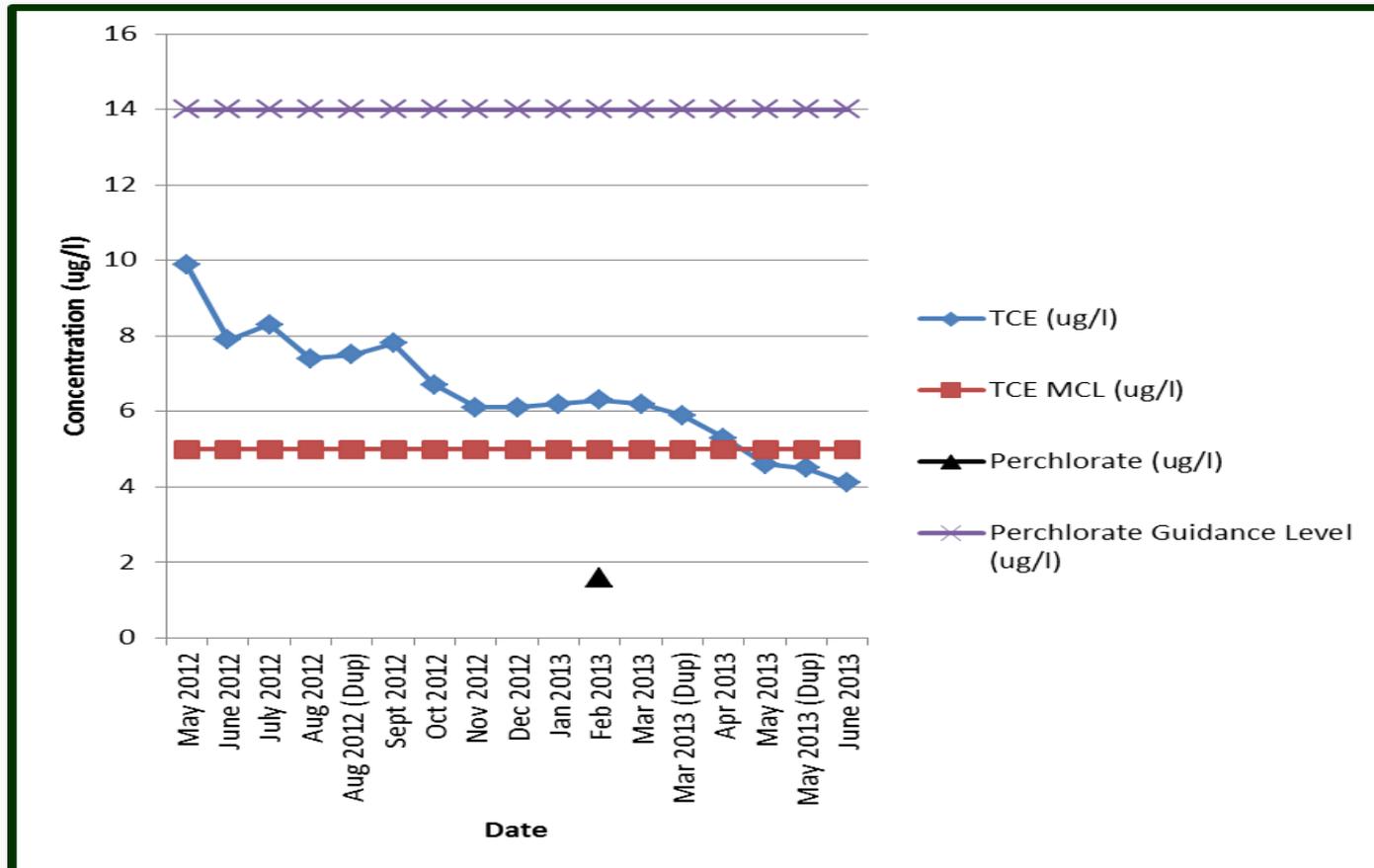
# COG-03 Area: EPA MW-2C (May 2012 – June 2013)



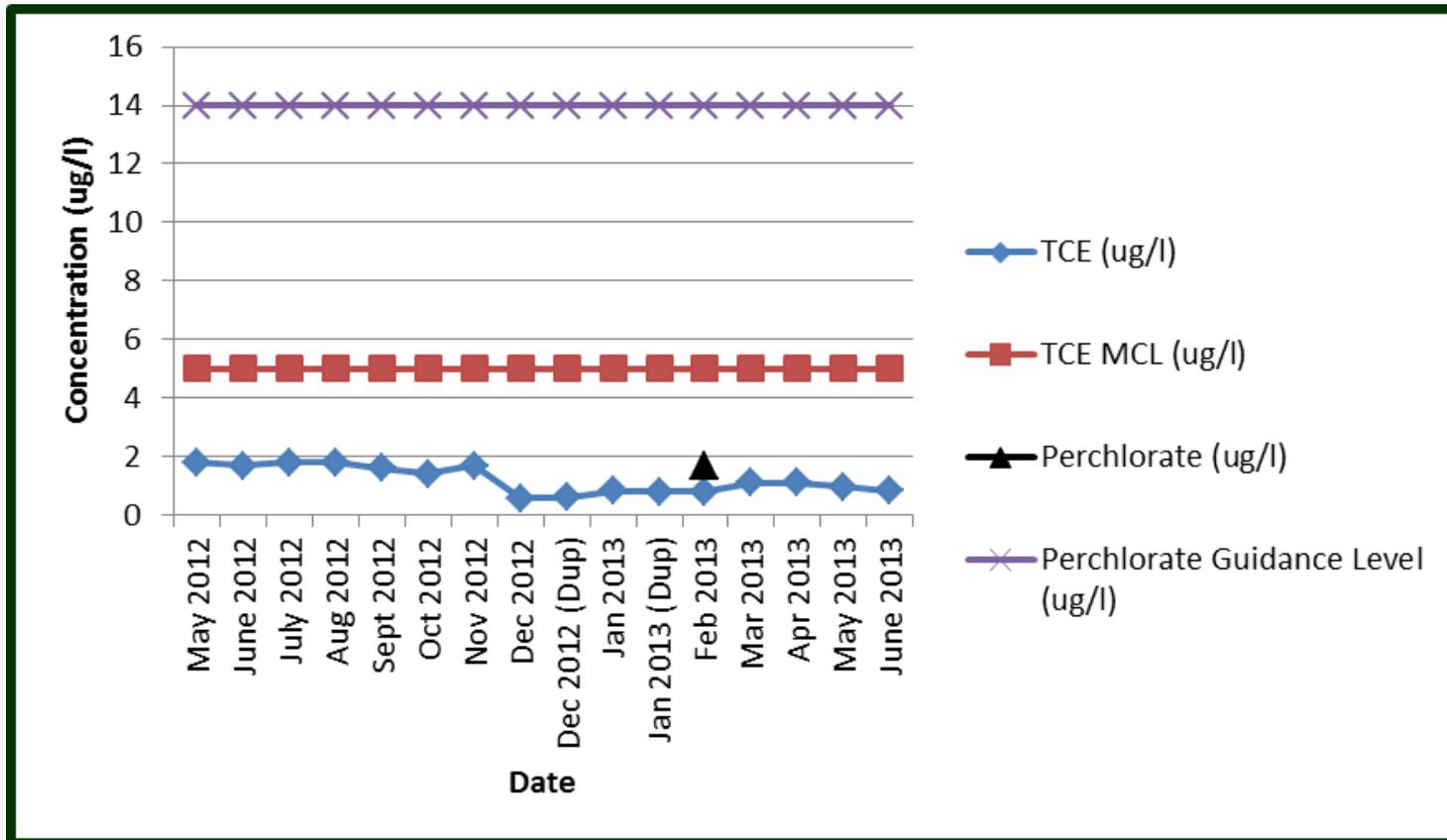
**Subunit C Sentinel  
Monitor Well for  
COG-03**



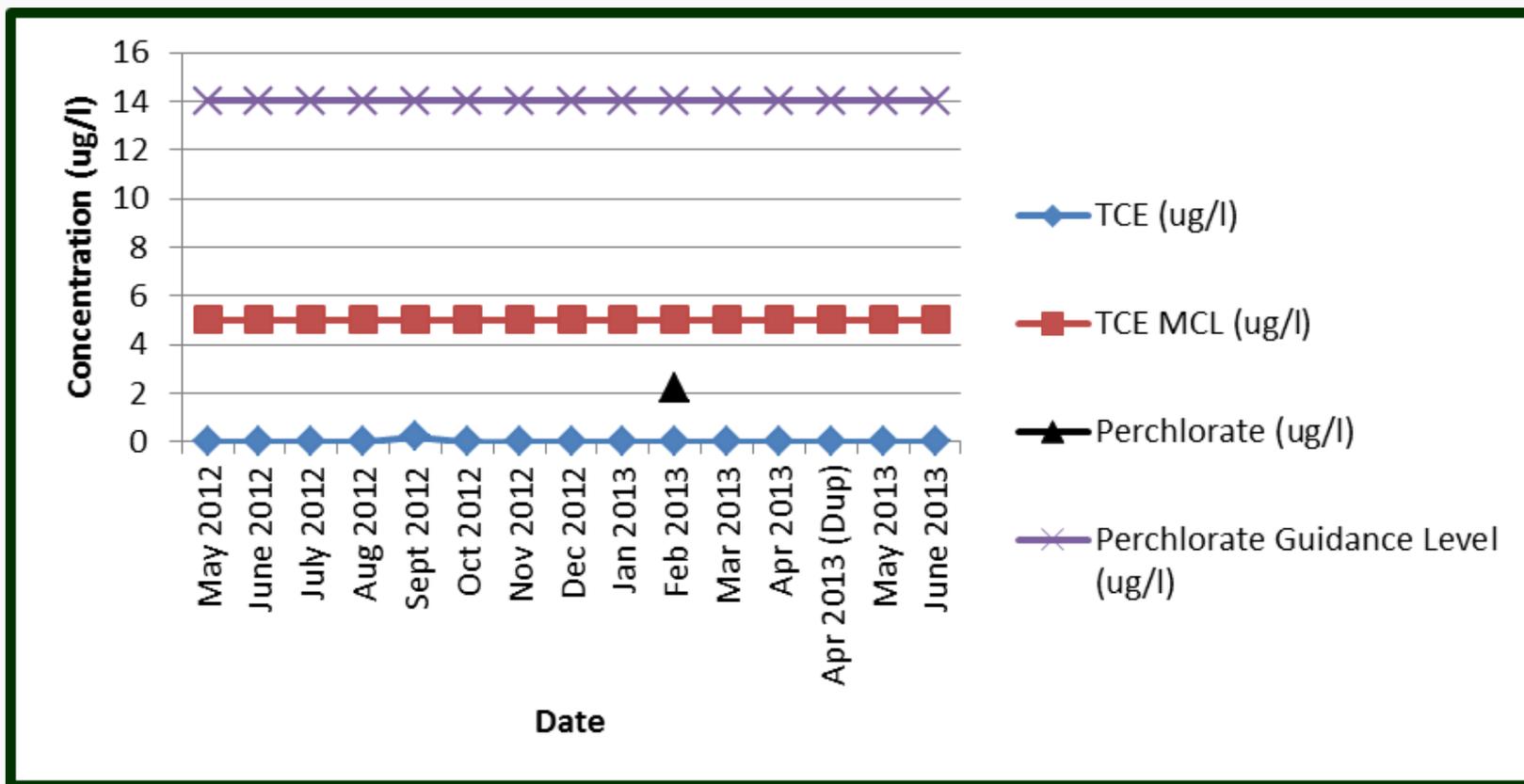
# NE Area: EPA MW-30A (May 2012 – June 2013)



# NE Area: EPA MW-43A (May 2012 – June 2013)

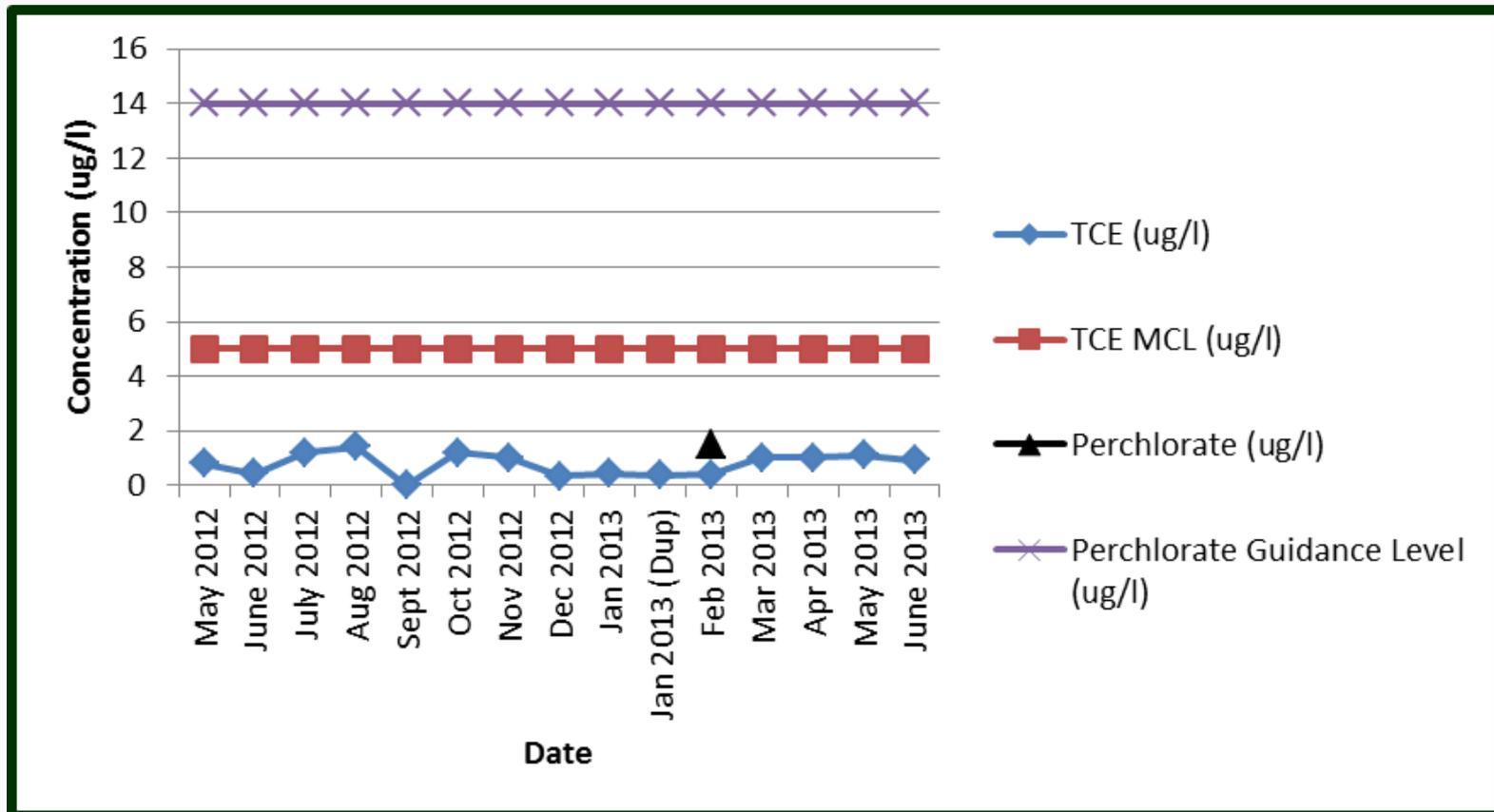


# NE Area: EPA MW-54A (May 2012 – June 2013)



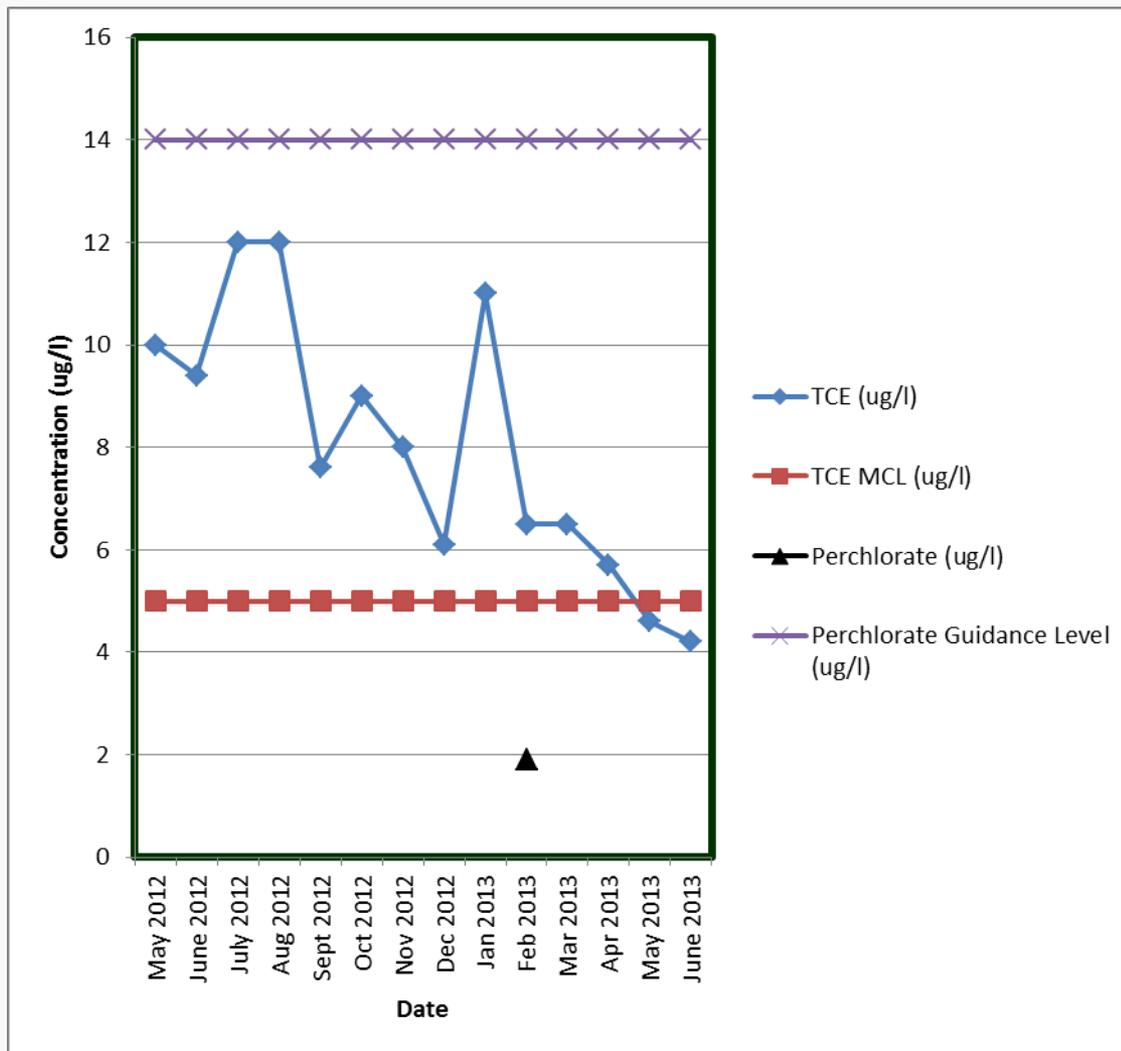


# NE Area: EPA MW-35A (May 2012 – June 2013)



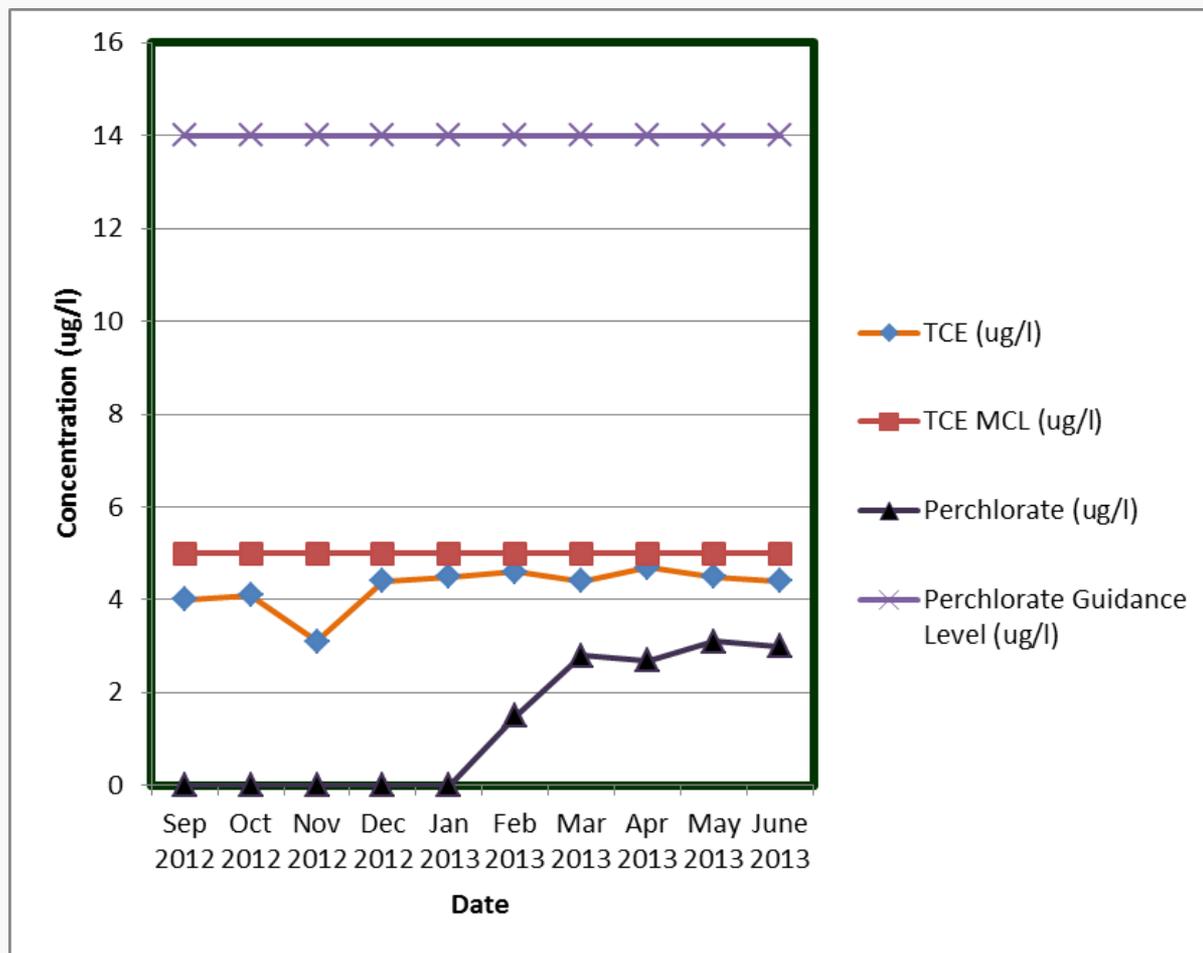


# NW Area: EPA MW-50A (May 2012 – June 2013)

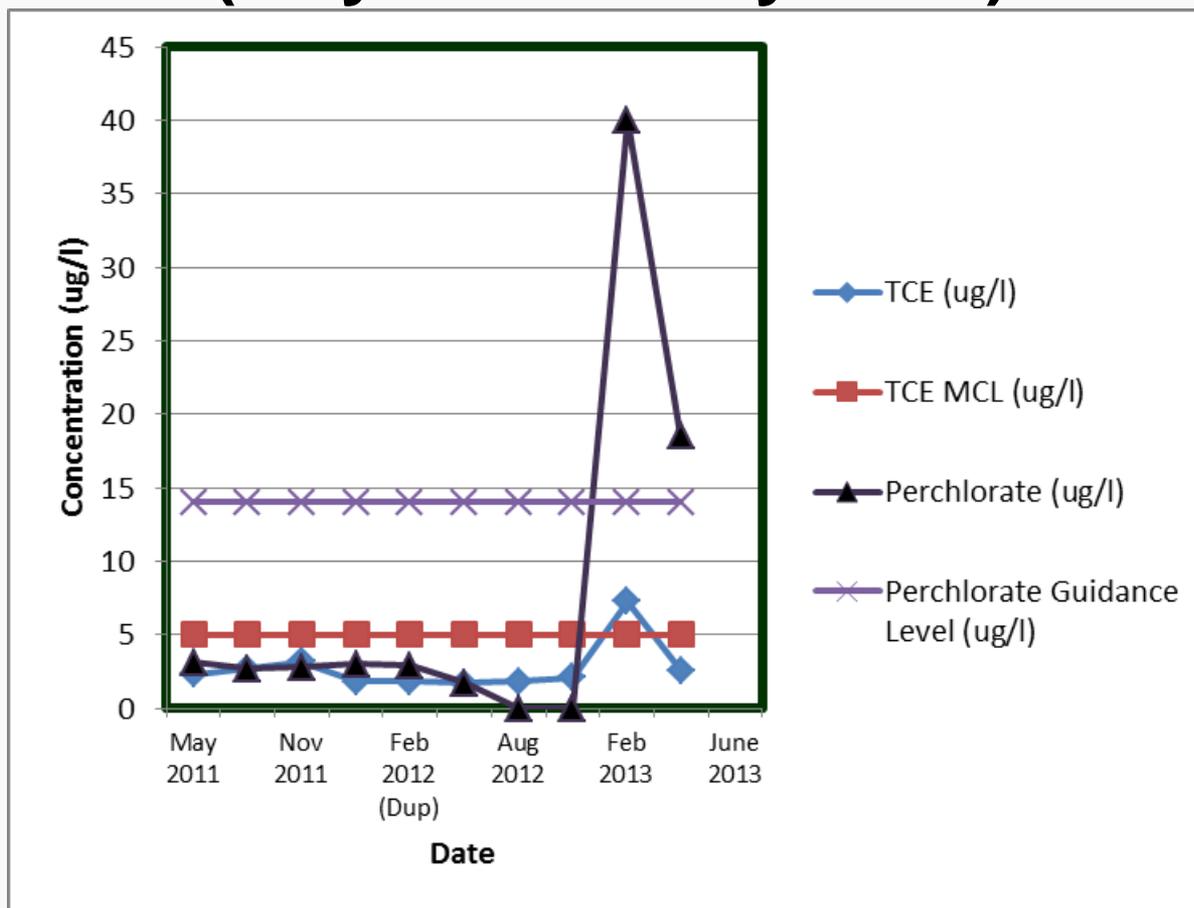




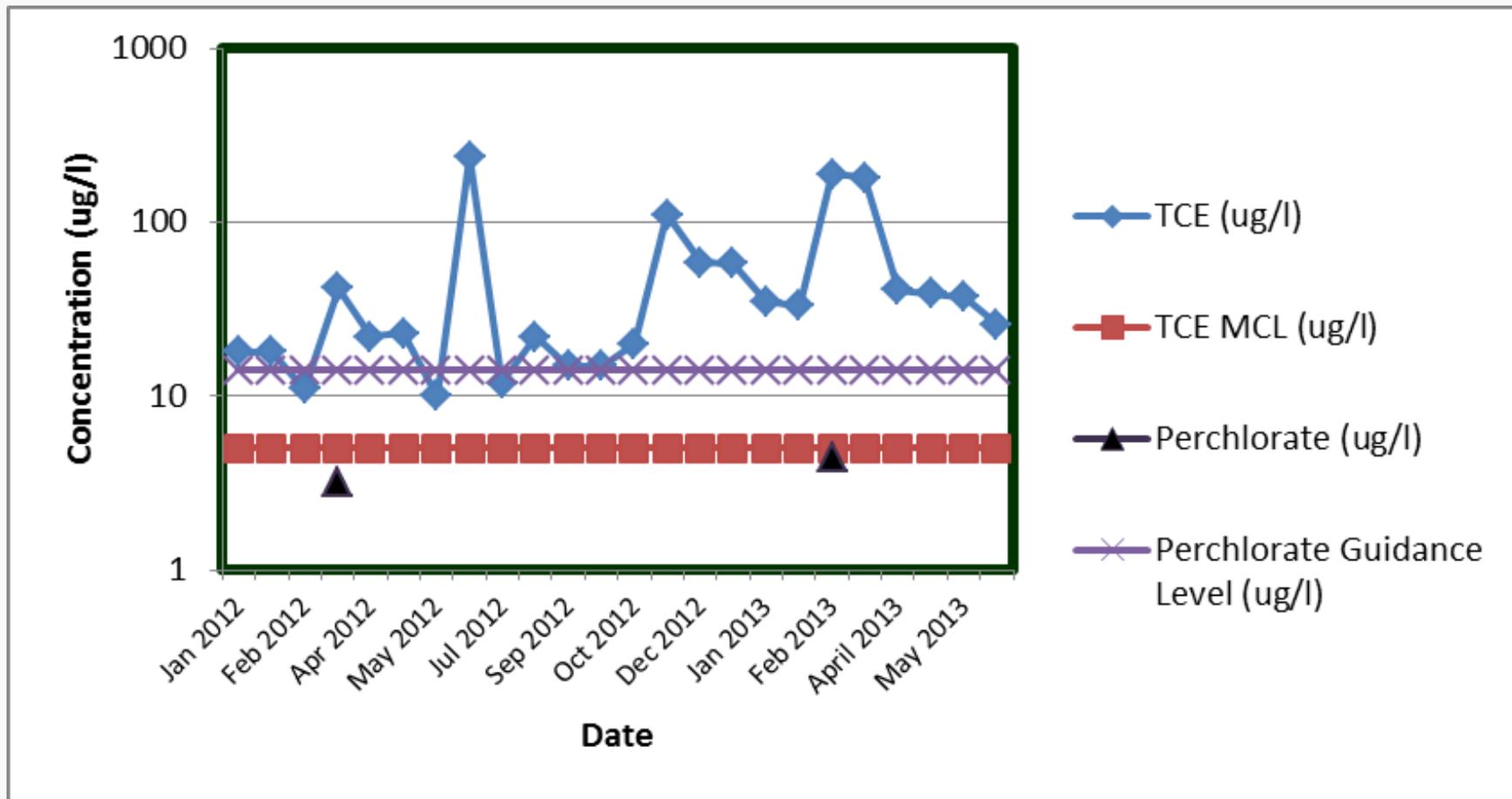
# NW Area: EPA MW-51A (September 2012 – June 2013)



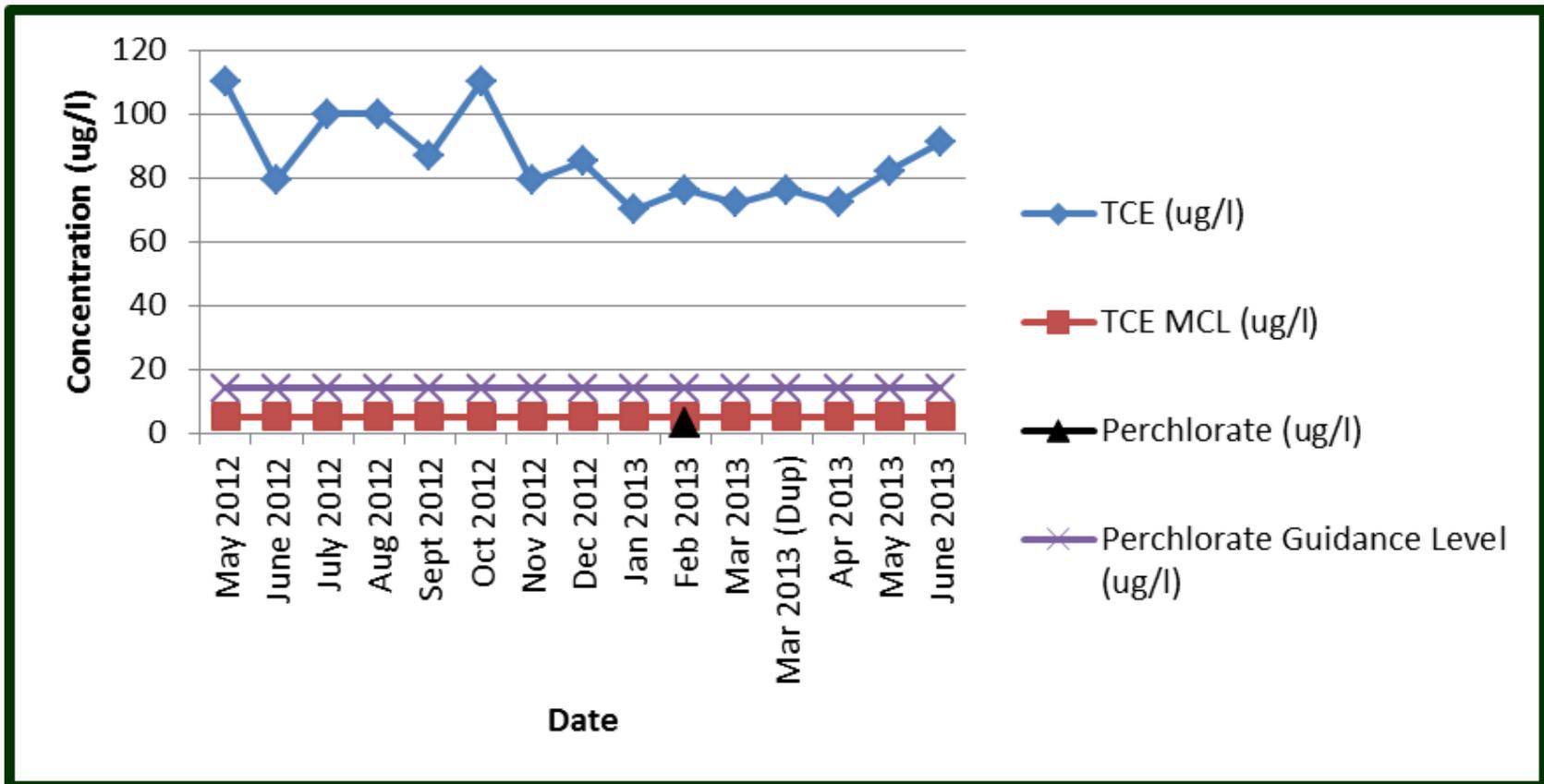
# On Site Area: MW-08 (May 2011 – May 2013)



# North Central Plume Area: MW-16 (January 2012 – June 2013)



# North Central Plume Area: EPA MW-38A (May 2012 – June 2013)



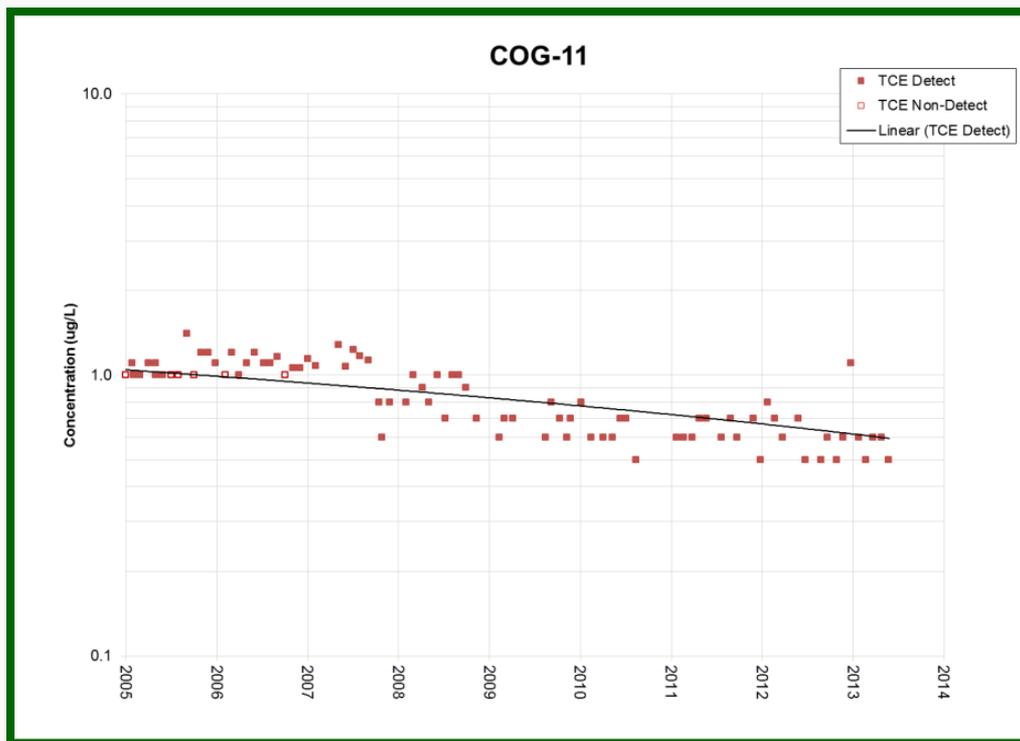


# Trend Analysis & GW Statistics PGA-South

## COG-11

(TCE Thru June 2013)

## Annual Review of COG-11 TCE Concentrations



June 2012	0.7 ug/l
July 2012	0.5 ug/l
August 2012	0.6 ug/l
September 2012	0.5 ug/l
October 2012	0.6 ug/l
November 2012	0.5 ug/l
December 2012	0.6 ug/l
January 2013	1.1 ug/l
February 2013	0.6 ug/l
March 2013	0.5 ug/l
April 2013	0.6 ug/l
May 2013	0.6 ug/l
June 2013	0.5 ug/l

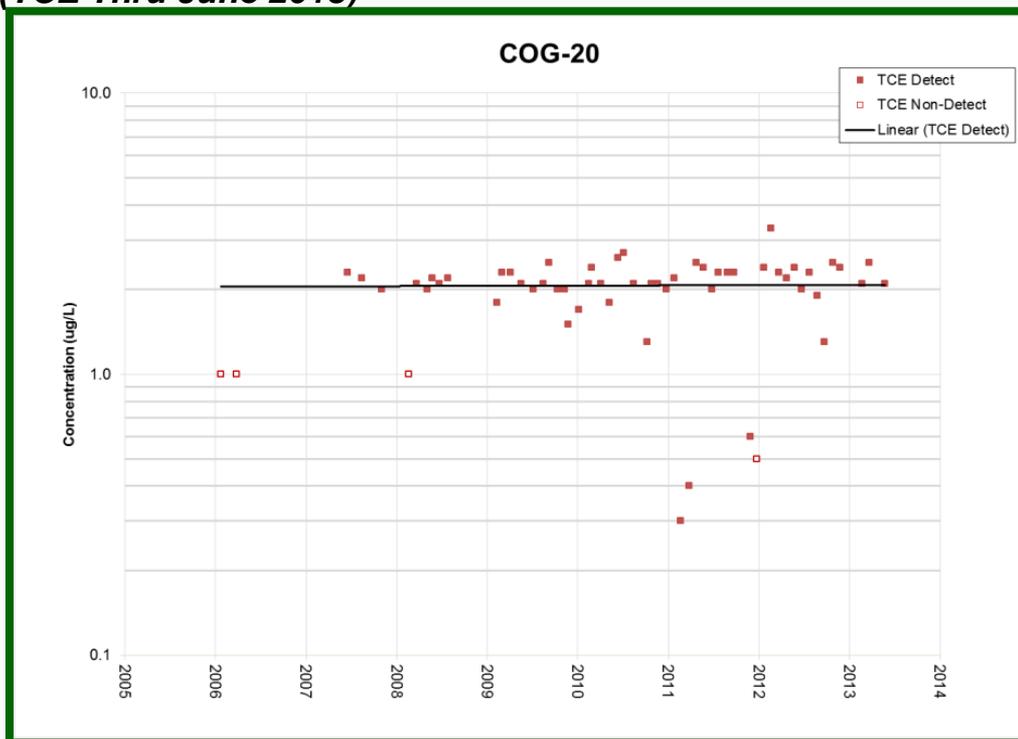
Figure Source: Haley & Aldrich, 8/8/2013 PGA-South Quarterly PM Meeting Presentation



# Trend Analysis & GW Statistics PGA-South

## COG-20

(TCE Thru June 2013)



## Annual Review of COG-20 TCE Concentrations

June 2012	2.4 ug/l
July 2012	2.0 ug/l
August 2012	2.3 ug/l
September 2012	1.9 ug/l
October 2012	1.3 ug/l
November 2012	2.5 ug/l
December 2012	2.4 ug/l
January 2013	NS
February 2013	NS
March 2013	2.1 ug/l
April 2013	2.5 ug/l
May 2013	2.5 ug/l
June 2013	2.1 ug/l

**NS = Not Sampled**

Figure Source: Haley & Aldrich, 8/8/2013 PGA-South Quarterly PM Meeting Presentation

# Selected Activities From Previous Quarter

## PGA-North

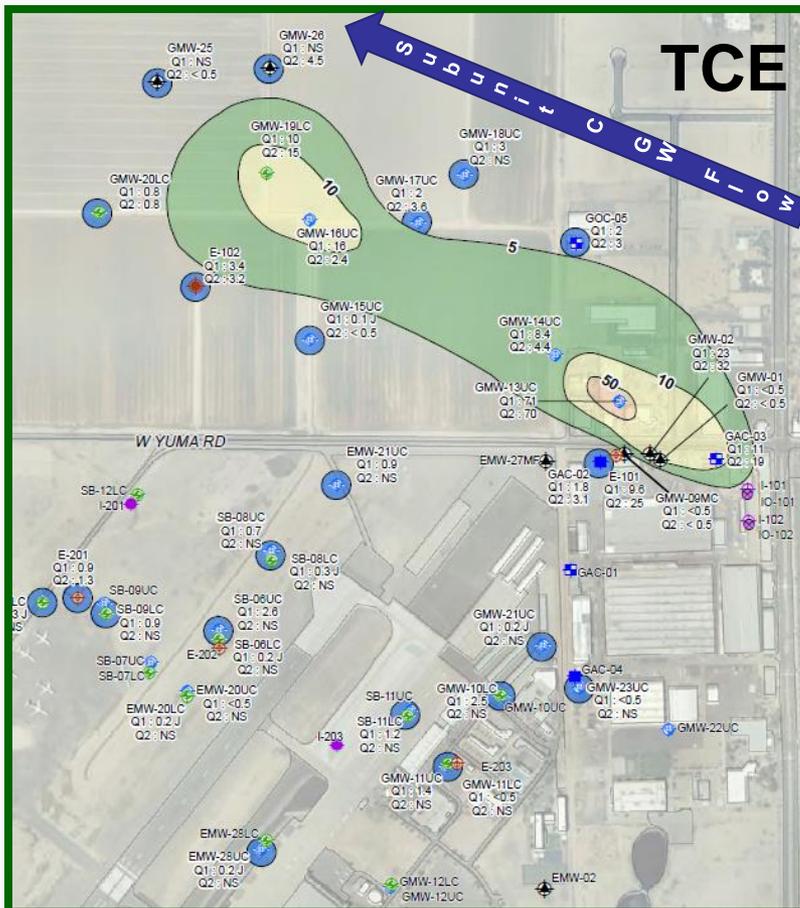
- Installation of 2 GW Monitor Wells
  - EPA MW-5B
  - EPA MW-28B
- MTS Upgrades to Facilitate Anticipated EA-09 Flows
- Final NW Subunit A Capture & Containment Plan Submitted & Approved
- Final Source Area Remediation Focused Feasibility Study Submitted
- Groundwater Model Update Report Submitted
- Final Updated SVE O&M Plan Submitted



# Selected Activities From Previous Quarter

## PGA-South

- New Technical Consultant for GTRC Team (Haley & Aldrich)
- TCE Data from May 2013 Groundwater Sampling Received (see figure on left)



	PIEZOMETER		INJECTION WELL - INACTIVE	<b>TCE CONCENTRATION (µg/L)</b>	
	EXTRACTION WELL - IN OPERATION		INJECTION WELL - OBSERVATION		
	EXTRACTION WELL - INACTIVE		MONITORING WELL		<5
	EXTRACTION WELL - OBSERVATION		MONITORING WELL - CITY OF PHOENIX		5 - 10
	INJECTION WELL - IN OPERATION		MONITORING WELL - NOT USED		10 - 50
					>100

Figure Source: Haley & Aldrich, 8/8/2013 PGA-South Quarterly PM Meeting Presentation (GW Direction Added)

# Selected Activities From Previous Quarter

## PGA-South

- Chromium Data from May 2013 GW Sampling Received (see figure on left)
- Northern Subunit C Chromium Investigation
  - 2 borings completed
  - Low total chromium and hexavalent chromium concentrations in filtered Hydropunch® groundwater samples

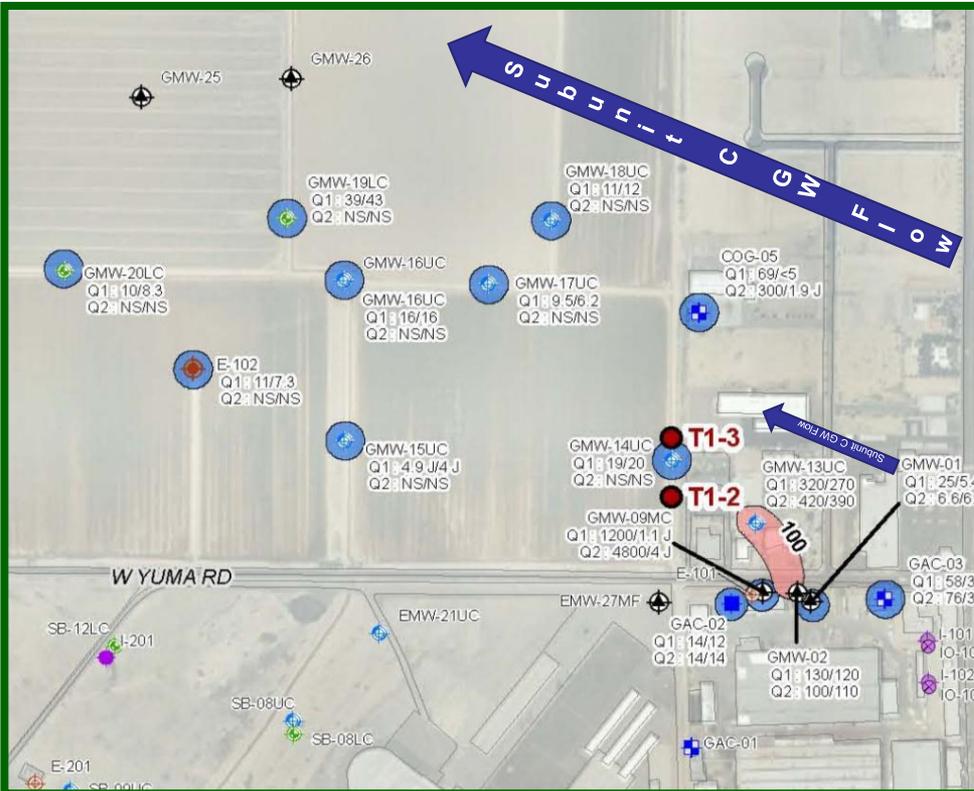


Figure Source: Haley & Aldrich, 8/8/2013 PGA-South Quarterly PM Meeting Presentation (GW Direction Added)

# PGA-South Chromium Investigation

## Boring T1-3 (Looking North)



## Boring T1-3 (Looking Northeast)





# PGA-South Chromium Investigation



**Boring T1-3  
(Looking  
Southeast)**



## Site Wide Activities from Last Quarter

- **Community Involvement Plan**

- Stakeholder comments received and incorporated into Final CIP
- Final CIP distributed to stakeholders and placed into the Local Site Repositories:
  - Goodyear Branch Library, 250 N. Litchfield Rd., Suite 185, Goodyear, AZ 85338
  - Sam Garcia Library, 495 E. Western Ave., Avondale, AZ 85323



## Source Area Investigations to Date: PGA-North

- 1984 – 1988 Soil & Soil Gas Investigations
  - 10 soil borings in Main Drywell Source Area (MDWSA)
  - Highest TCE in Soil = 5,585.2 mg/kg
  - Shallow Soil Gas Survey to delineate TCE and guide groundwater monitor well installations
  - Drywells within MDWSA were primary source of TCE in soil and groundwater
- 2002 – 2003 CH2M Hill Source Area GW Investigations
  - High TCE and perchlorate concentrations in Subunit A GW
  - Conduit wells identified on site (COG-04)
  - Subunit C groundwater contamination identified
  - TCE detected in groundwater samples in Subunit C from soil borings near MW-20 area



## Source Area Investigations to Date: PGA-North

- 2007 Main Drywell Source Area (MDWSA) Investigation
  - Investigate drywell construction
  - Highest groundwater contamination is found in Subunit A with maximum TCE concentrations from 110 ft to 130 ft bgs
- 2007-2008 Phase 1 Source Area Soils, Facilities, & Structures (SASFS) Investigation
  - 13 confirmed waste management locations investigated
  - 19 potential source areas investigated
  - Removal of waste disposal structures confirmed waste management locations (not including Main Drywells)



## Source Area Investigations to Date: PGA-North

- 2008-2011 Phase II SASFS Investigation
  - No additional sources or additional COCs were identified
- 2009 – Demolition and Removal of Facility Buildings/Structures
- 2009 - 2011 – Phase I Soil Gas Investigation
  - Six soil gas borings – also collected soil and groundwater data
  - Confirm results of previous soil & soil gas investigations
  - Collect geochemical data for use in modeling



# Source Area Investigations to Date: PGA-North

- Remediation Pilot Tests in MDWSA
  - 2004 – Bench Scale Test for Nano-scale Zero Valent Iron (nZVI) to reduce TCE and perchlorate concentrations
  - 2005 – 1<sup>st</sup> nZVI Pilot Test
    - Gravity feed injection
    - Injection wells clogged
  - 2008 – 2<sup>nd</sup> nZVI Pilot Test
    - Gravity feed injection
    - Still difficult to inject sufficient volume of nZVI
  - 2010 – 3<sup>rd</sup> nZVI Pilot Test
    - Jet-assisted injection
    - Radius of influence up to 29 ft



# Proposed Plan Activities for PGA-North

## Focused Feasibility Study for PGA-North Main Drywells Source Area Remediation

- Revised Final Source Area Focused Feasibility Study – Submitted August 2, 2013

## EPA Writing Proposed Plan

- Upcoming Agency Review (ADEQ/EPA HQ)
- Public Meeting in Fall 2013
- Remedial Technologies Presentation
- Public Comment Period will be Announced

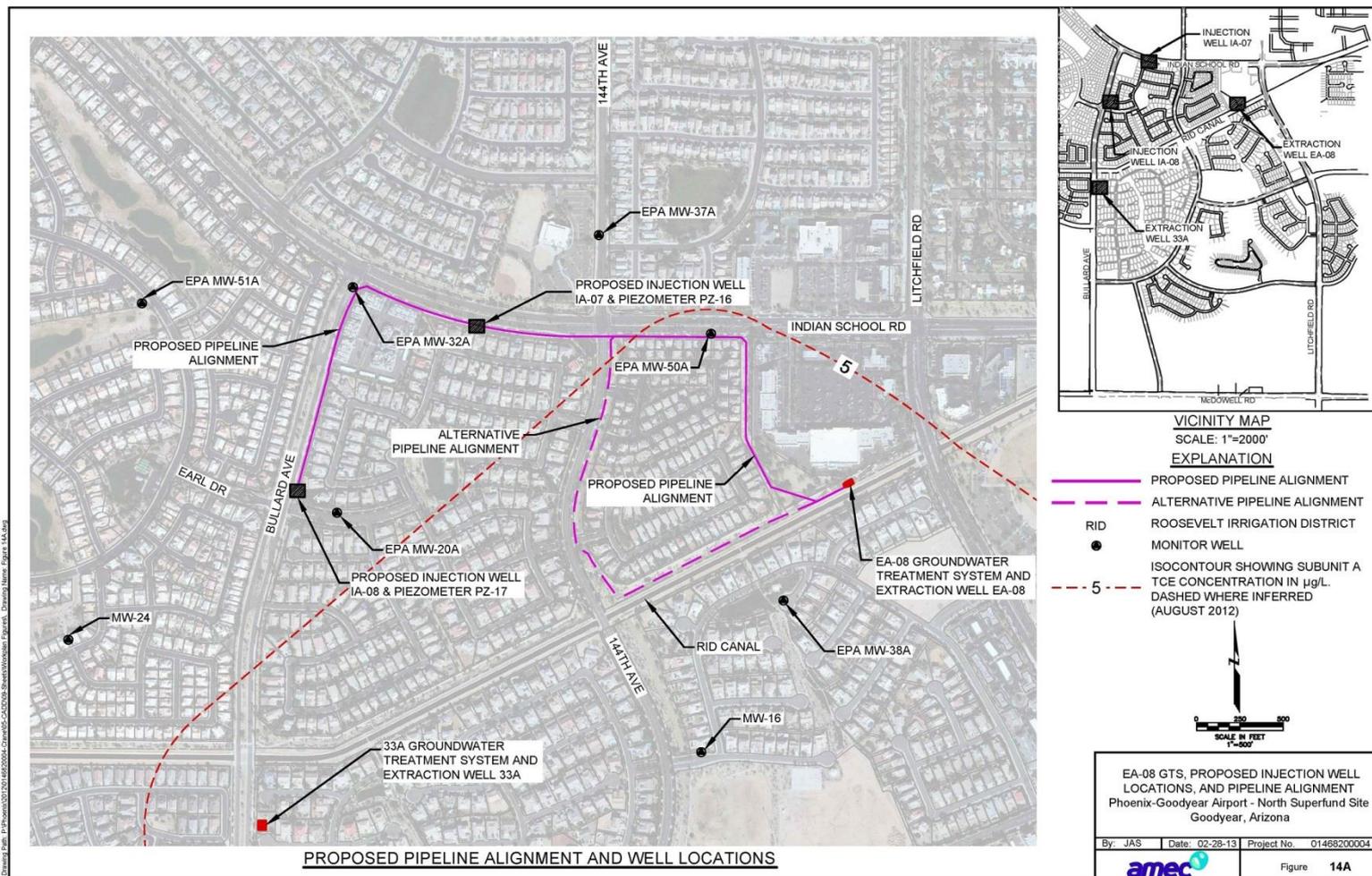


# Plans For Next Quarter

## PGA-North

- Start-up of Subunit A Extraction Well EA-09
  - APS Power Drop Expected to be Completed mid-August
  - Start-up/Shake-down (Late August/Early September)
- Installation of Monitor Wells
  - EPA MW-8A (Stepout for EPA MW-7A)
  - EPA MW-5A (NW of EPA MW-10A)
  - EPA MW-14A (Stepout for EPA MW-7A)
  - EPA MW-3A (Data gap between 33A & EA-08)
- Redevelopment of Subunit C Wells
  - EPA MW-39C
  - EPA MW-63C
- Northwest Injection System – Finalize Access/Begin Trenching

# Proposed Pipeline Alignment: PGA-North





# Plans For Next Quarter

## PGA-South

- Evaluate options for Northern Subunit C Chromium Investigation
- Meeting to discuss status and objectives for PGA South Groundwater Model
- Cap Inspection of Former Chrome Sludge Drying Bed



Questions???