

**Cooper and Commerce Water Quality Assurance Revolving Fund (WQARF) Site  
Community Advisory Board (CAB) Meeting**

**Thursday, June 23, 2011 at 6 p.m.-8 p.m.  
McQueen Park Activity Center  
510 N. Horne St., Gilbert, Arizona**

**FINAL MINUTES**

OU #11-071

CAB Members present: Michael Evans, Bruce Friedrich, Pacer Udall, and Carrie Lewis

CAB Members absent: Bobbi Buchli, and Nyanganya (Joe) Maniga

ADEQ Staff in attendance: Scott Goodwin, Project Manager; and Felicia Calderon, Community Involvement Coordinator

Members of the public present: Tim Rinesmith, Town of Gilbert resident

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The following matters were discussed, considered, or decided at the meeting:

**1. Welcome and introductions**

Ms. Calderon greeted all attendees and announced the official CAB resignation of Ms. Gnadt from the Board. After introductions the meeting was turned over to the Co-chair, Mr. Udall.

**2. Acceptance and/or changes to February 24, 2011 Meeting Minutes**

Ms. Evans motioned to accept the meeting minutes as written, and Ms. Lewis seconded the motion. These minutes were accepted unanimously by the CAB.

**3. CAB business to include CAB members briefing to new Gilbert Town Council members regarding the Site-Mike Evans, CAB Co-chair**

Mr. Evans requested the CAB update the newly elected Town Council members regarding the Site. Mr. Evans volunteered to do such a presentation and Ms. Lewis offered to assist Mr. Evans in this project. Ms. Calderon offered to provide any supplemental documents for this presentation to include business cards for Mr. Goodwin, the Project Manager, and site background information. Mr. Evans stated that he would communicate to Ms. Calderon the scheduled date of this meeting, to update the rest of the CAB. Mr. Evans noted that such a meeting with council members may have to be conducted over two meetings to accommodate the full schedules of its members. Mr. Evans moved for himself and Ms. Lewis to conduct the Town Council Site update and to debrief the CAB at their next Board meeting in October. Mr. Friedrich seconded the proposed action. The motion was accepted unanimously by the CAB.

Ms. Calderon discussed CAB member, Ms. Buchli's absence at several Board meetings and stated that as per their charter "if a member fails to attend or sends an alternate to two consecutive meetings, the CAB Co-chairs may initiate termination procedures." Ms. Calderon added that she had not heard from Ms. Buchli after several attempts to contact her. The CAB agreed that at the next Board meeting scheduled in October that a discussion and vote would be initiated to remove Ms. Buchli from the CAB. Ms. Calderon mentioned that she would send Ms. Buchli an official letter advising her of this action and would also carbon copy both Co-chairs.

**4. Discussion of current status and activities at the Cooper and Commerce WQARF Site to include: soil vapor contaminant recovery results; status of the pump and treat system; sampling results from the 1st quarter 2011 groundwater monitoring, monitor well installations for the Site - Scott Goodwin, Project Manager**

Mr. Goodwin first updated the CAB on the ongoing installation of the monitoring well (MW) #113 on Encinas Street, and the mechanical problems associated with the well installation. Mr. Goodwin then proceeded to update the CAB on other Site activities.

**See presentation below**

Mr. Goodwin discussed with Mr. Udall tetrachloroethene (PCE) recovery amounts from the soil vapor extraction (SVE) system.

Mr. Goodwin clarified for Mr. Evans that during the first quarter of 2011, 7,805,718 gallons of pumped and treated water was sent to the canal and that this water met drinking water standards.

Mr. Goodwin elaborated on the "particle tracking analytical model" for Mr. Evans.

The CAB discussed with Mr. Goodwin the test results meant to evaluate the capture zone of the groundwater remedial system in place. Mr. Goodwin reported that the results of this evaluation suggest the capture zone may encompass an area of sufficient size to achieve source containment. Mr. Goodwin indicated that HGC and ADEQ are still evaluating the capture zone due to the recent change in groundwater flow direction to the south-west and the increasing concentrations in monitor well G-10.

Mr. Friedrich requested sampling for vapors in the southwest area, particularly the neighborhoods where the PCE groundwater concentrations are increasing. Mr. Goodwin advised that the U.S. Environmental Protection Agency's vapor intrusion guidance indicates that as long as the depth to water is more than 100ft., vapor intrusion should not be a concern, although with the recent rise in the water table, the depth to groundwater may be less than 100 ft. now. Mr. Goodwin added that vapor samples were collected at 10ft. when MW-108 and MW-109 were drilled about three years ago. These samples yielded non detect results for PCE. Mr. Friedrich stated that that sampling was a long time ago and that the contamination levels were lower then. Mr. Goodwin acknowledged Mr. Friedrich's request and stated he would check the current water level in MW-108 and consult his management.

Mr. Evans revisited the discussion of a potential second contamination source for the Site previously mentioned by Mr. Goodwin. Mr. Goodwin stated that about 20ft. south of MW-102, PCE was detected in soil samples collected in 2006, and this area is outside of the mathematical capture area for the extraction well. Mr. Goodwin followed up his statement by adding that the

rapid declining concentrations of PCE in SVE-105 indicate that this area may not be a strong PCE source.

#### **5. Call to the Public-**

Mr. Rinesmith gave a brief update on his involvement and the activities for the Environmental and Energy Conservation Board, formally called Town of Gilbert Environmental Programs Task Force.

#### **6. Future Meeting and Agenda Discussion**

The next CAB meeting will be held at the McQueen Park Activity Center, 510 N. Horne St., Gilbert, Arizona, on Thursday, October 20, 2011, beginning at 6 p.m. Agenda items for the next meeting included: contaminant recovery results from remediation systems; sampling results from groundwater monitoring wells to include MW-108; future site activities; Town of Gilbert Council post meeting update by CAB; discussion and vote of CAB presentation to the Environmental and Energy Conservation Board; CAB membership discussion and vote; and discussion and vote of CAB engagement approaches with State Legislature.

#### **7. Adjournment**

Mr. Udall adjourned the meeting.



# Cooper and Commerce Water Quality Assurance Revolving Fund (WQARF) Site

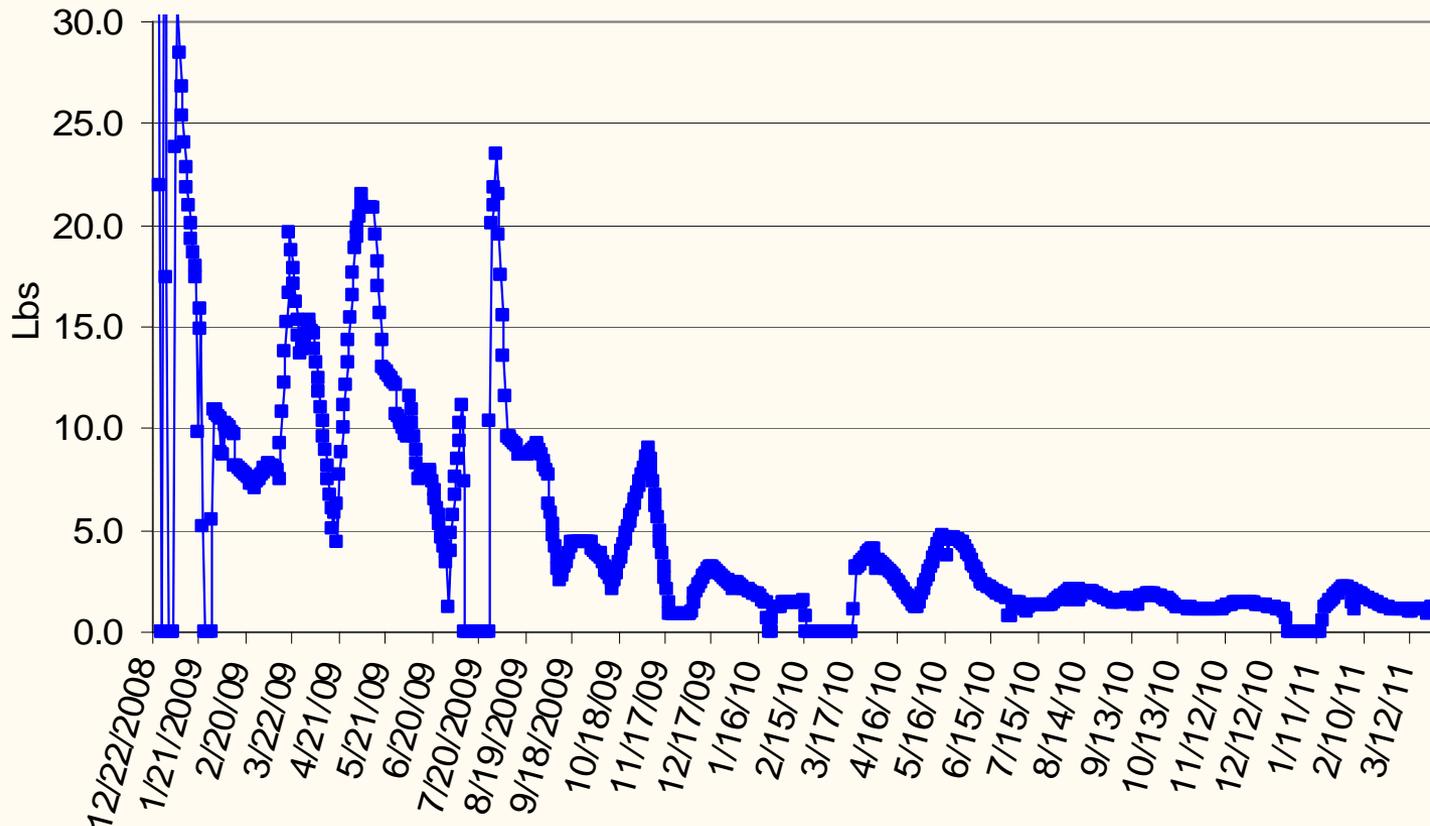
CAB Meeting

June 23, 2011

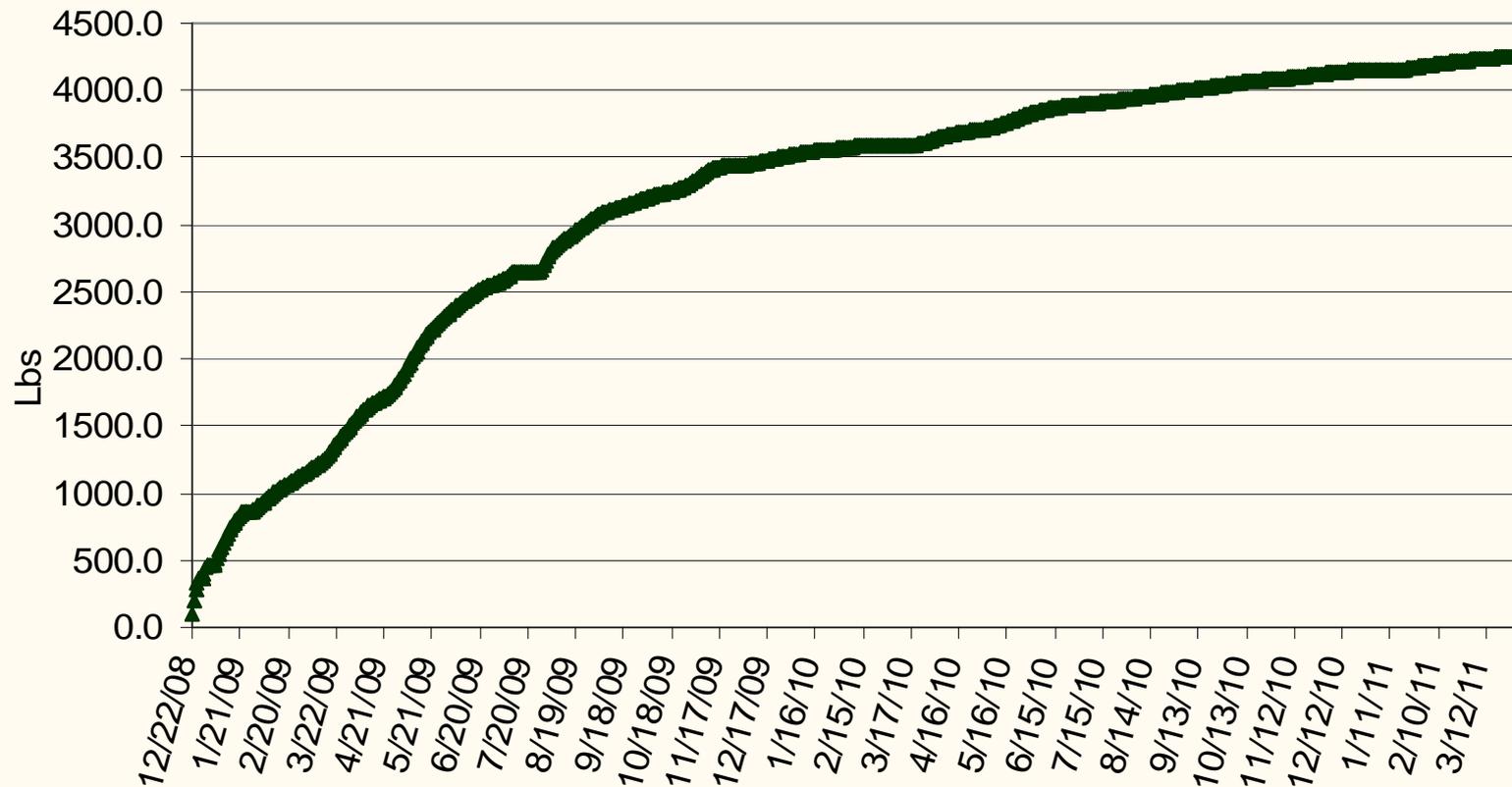
## Soil vapor extraction/ air sparge system

- The soil vapor extraction (SVE) system continues to operate normally at the site.
- The air sparge component of the system is currently not operating due to mechanical failure. Air sparging will resume when part is replaced.
- SVE-105 was added to the extraction system on January 20, 2011.
- During the first quarter of 2011, the system removed an average of 1.5 pounds of tetrachloroethene (PCE) per day. Including the first quarter of 2011, the system has removed 4,259 pounds of PCE or approximately 315 gallons since operations began in December 2008.
- The SVE system was shut down December 22, 2010 through January 13, 2011 for a carbon change-out.

**Cooper and Commerce AS/SVE System  
 Daily PCE/TCE Recovery (lbs/day)**



**Cooper and Commerce AS/SVE System  
Cumulative PCE/TCE Recovery (lbs)**



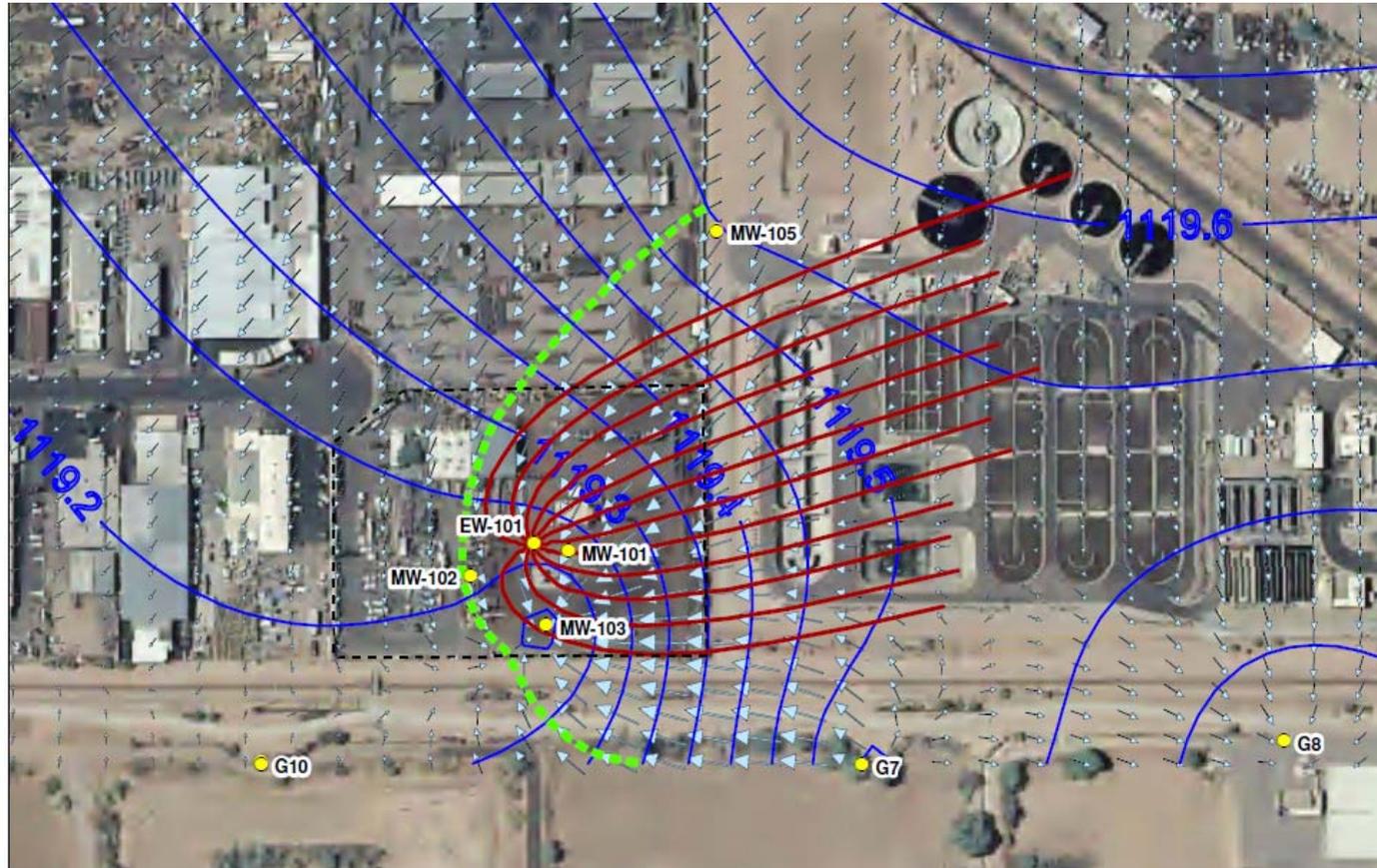
## Pump and treat system

- The pump and treatment system at the site became operational August 2, 2010 and commenced continuous operations on August 25, 2010.
- During the 1<sup>st</sup> quarter of 2011, the system operated at a rate of approximately 105 gallons per minute (gpm) and pumped and treated 7,805,718 gallons during the first quarter. Influent concentrations from the extraction well averaged 78 parts per billion (ppb.) over the quarter. Based on these numbers, the pump and treat system recovered approximately 4.6 pounds of PCE during the first quarter of 2011. Since operations began the pump and treat system has recovered approximately 19 pounds of PCE. The system was shut down from January 5, 2011 to February 15, 2011 for a carbon change-out.

## Pump and treat system

- An aquifer test was performed during the week of February 14, 2011 to refine aquifer property estimates and determine if aquifer property estimates have changed as a result of water level increases over the last several years. The test consisted of pumping EW-101 at a rate of approximately 110 gpm for approximately 24 hours while monitoring water levels at MW-101, MW-102, MW-103, and MW-105.
- The groundwater remedial system was evaluated using test data obtained during a limited aquifer test and the boundaries of the extraction well's capture zone were estimated using three primary methods: simple mathematical calculation of boundary limits; an analysis of measured water levels; and an analysis using a particle tracking analytical model. A fourth method using trends in concentrations of PCE was also evaluated.

- The results of this evaluation suggest the capture zone may not encompass an area of sufficient size to achieve source containment. This is based on three factors: (1) the potential for another source in the area around MW-102, as indicated by high PCE concentrations measured in soil-gas from SVE-105; (2) the recent increase in PCE concentrations in groundwater samples from G-10; and (3) the location of the leading edge of the capture zone indicated by the results of this evaluation. Hydro Geo Chem (HGC) believes the results of the capture zone evaluation indicate another extraction well west of EW-101 may be needed. ADEQ is still evaluating the capture zone by monitoring the PCE concentrations in G-10.



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### Explanation

- MW-106 Monitor Well
- - - Skyline Steel Yard (Remediation System)
- Capture zone estimated from water level contours
- Capture zone estimation using site hydraulic properties and an analytical model
- Groundwater contours (ft amsl)
- Magnitude and direction of local hydraulic gradient





**HYDRO  
GEO  
CHEM, INC.**

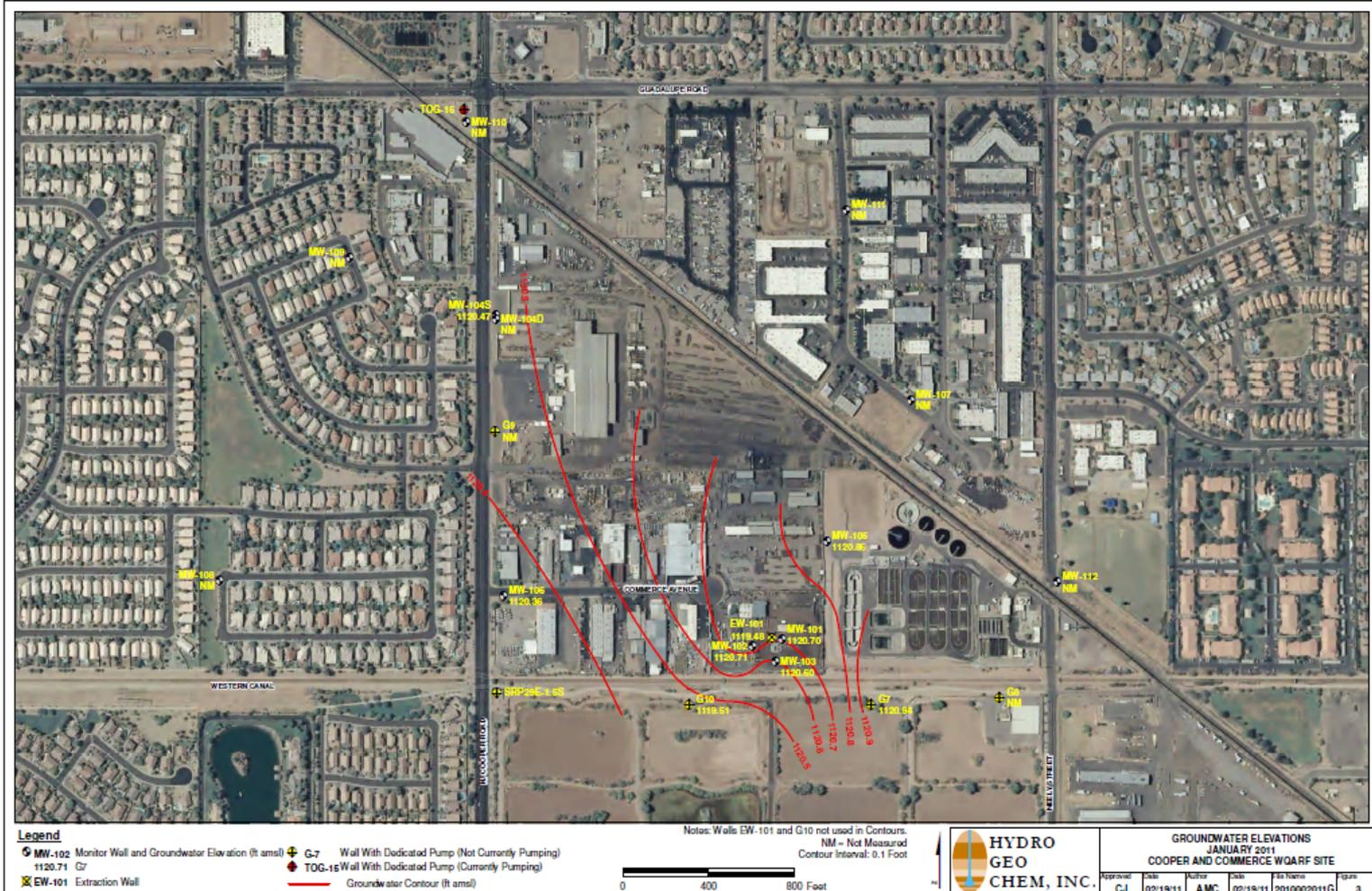
**GROUNDWATER CAPTURE EVALUATIONS  
USING OCTOBER 2010 GROUNDWATER DATA**

Approved	Date	Author	Date	File Name	Figure
SJS	03/17/11	DRS	06/15/10	201000206G	6

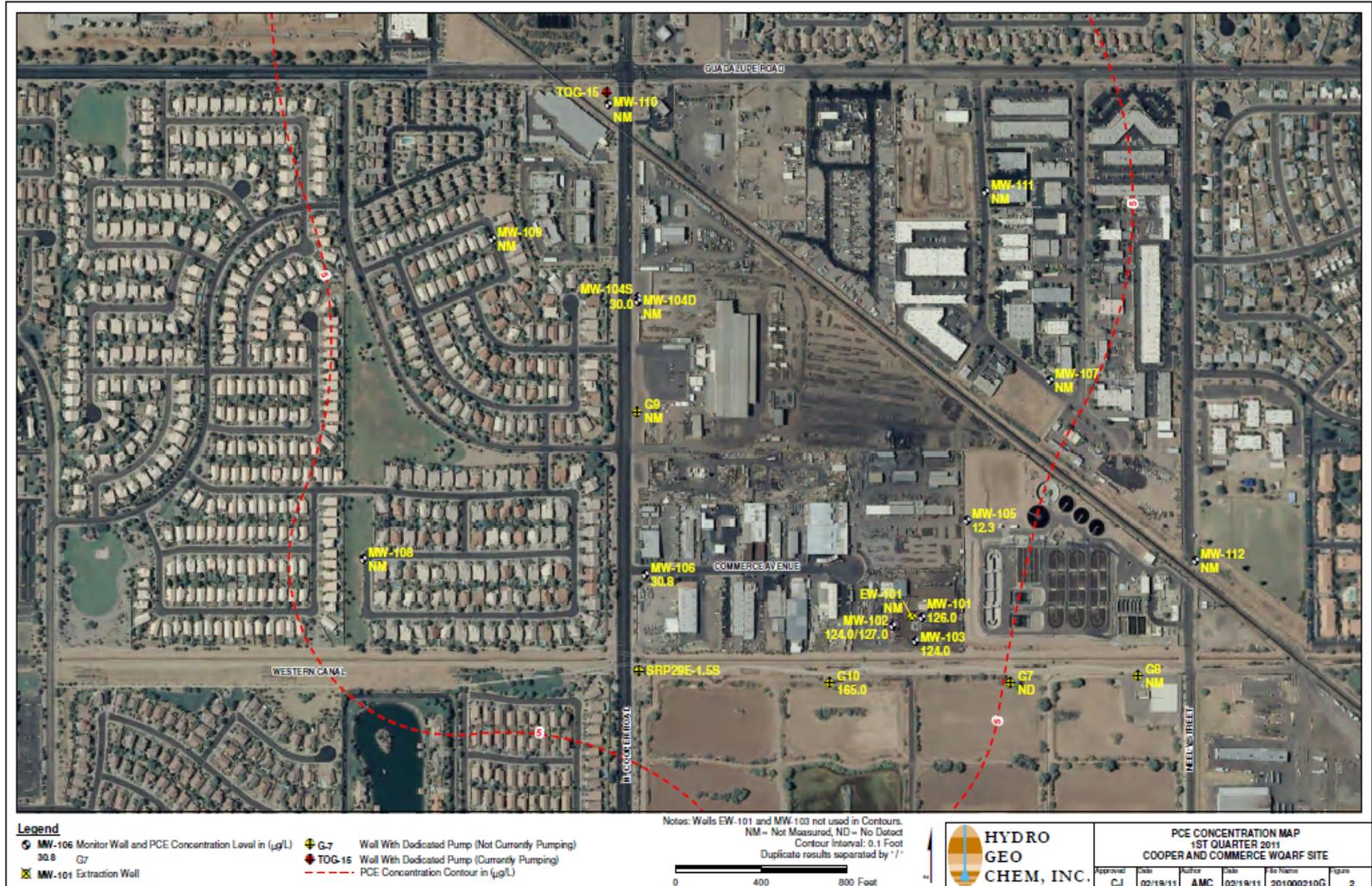
## 1st Quarter 2011 Groundwater Sampling

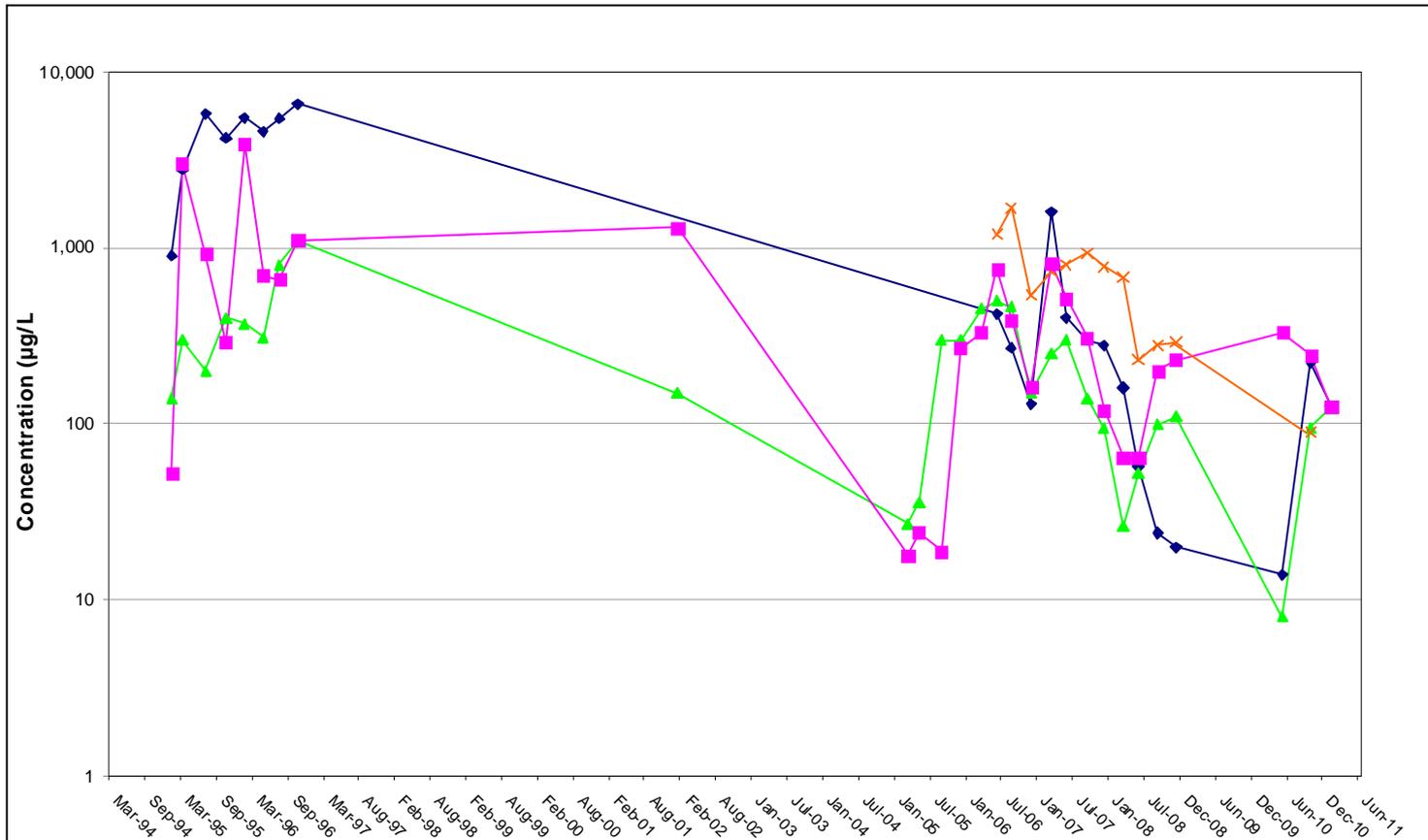
- During January 2011, ADEQ conducted a round of groundwater sampling at the wells located near the extraction well.
- PCE concentration in the on-site wells generally decreased compared to 4<sup>th</sup> quarter 2010 concentrations. PCE concentrations in all on-site wells are near 120 ppb.
- PCE concentrations in well G-10 continue to rise, and the concentrations in most other wells sampled in both the 4th quarter of 2010 and the 1st quarter of 2011 remain stable.

# 1st Quarter 2011 Groundwater Sampling



## 1st Quarter 20110 Groundwater Sampling

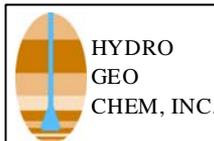




**EXPLANATION**

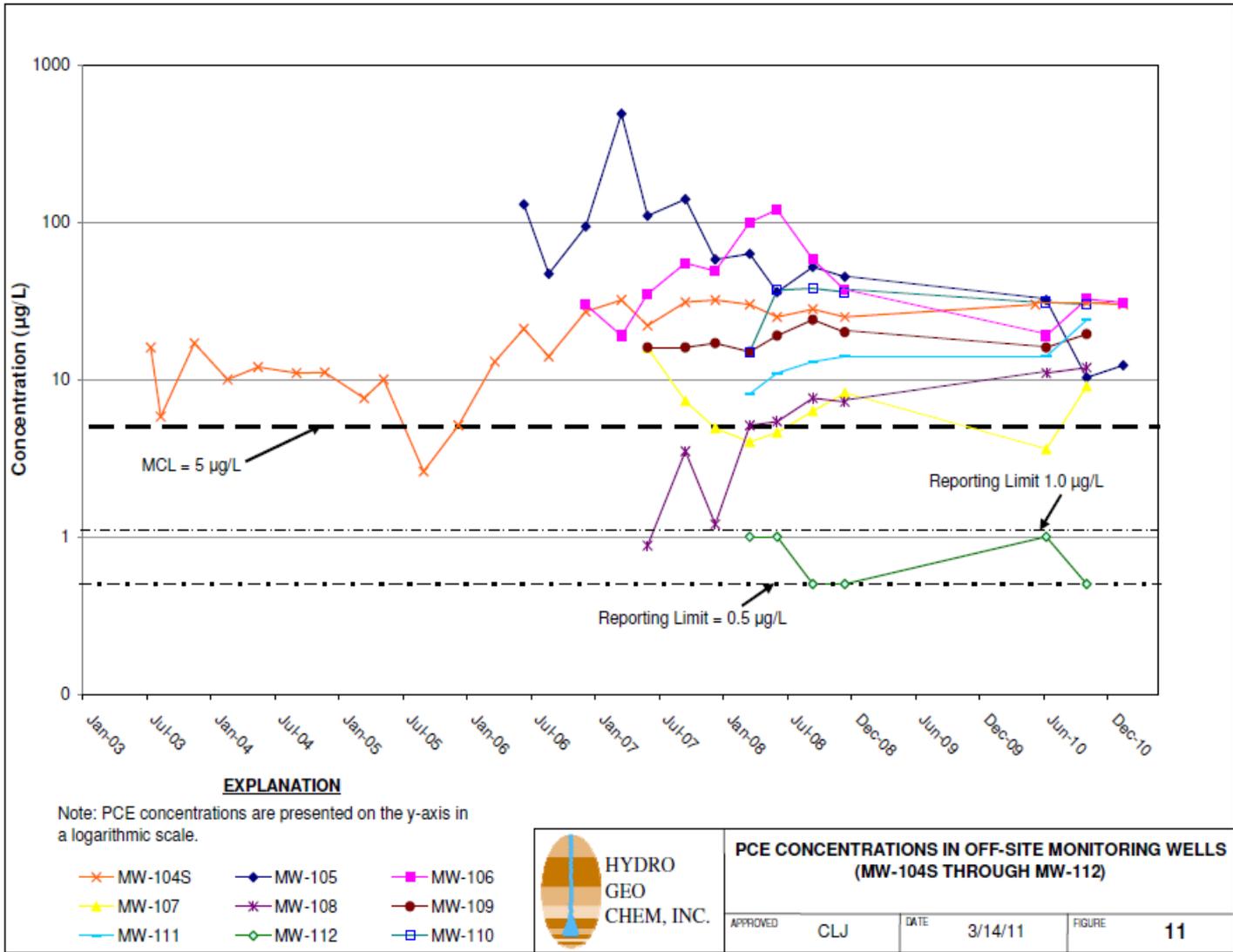
Note: Due to range of PCE concentrations detailed, y-axis is in a logarithmic scale.

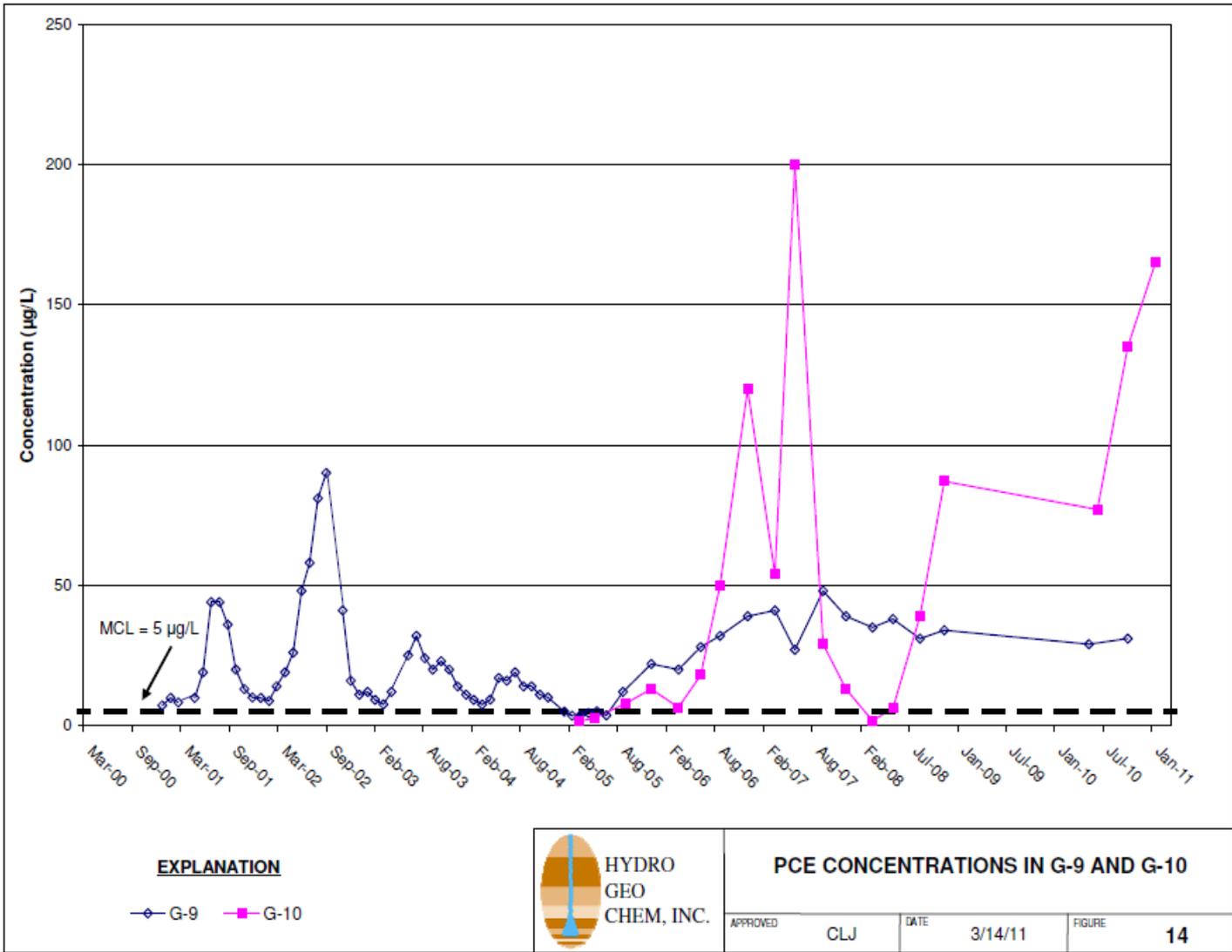
- ◆ MW-101
- ▲ MW-103
- × EW-101
- MW-102



**PCE CONCENTRATIONS IN ON-SITE MONITORING WELLS  
(MW-101 THROUGH MW-103 & EW-101)**

APPROVED	CLJ	DATE	3/14/11	FIGURE	10
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## Update on monitor well drilling

- ADEQ and HGC began installation of MW-113 on Encinas Street on June 6th 2011. Because these wells were being drilled in neighborhoods near the site, ADEQ opted to use a quieter rig with a down-hole hammer. Due to several mechanical failures, as of this writing, the rig is still working on the Encinas location.

Questions?

# Contact Information

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Remedial Projects Section

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