

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

Monday, October 18, 2010

6:00 p.m.-8:00 p.m.

Arizona Department of Environmental Quality, Room 145
1110 W. Washington, Phoenix

DRAFT MINUTES

Ref: PIOUS #11-023

CAB members present: Peter Zorbas, Pam Perry, Stan Watts, Paul Barquinero, Lynn Morrow, and Jean Schroeder

CAB members absent: Frank Mendola

ADEQ staff in attendance: Kevin Snyder, Project Manager; and Felicia Calderon, Community Involvement Coordinator

Members of the public present: Joe Helm, Brophy College Preparatory

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

1. Welcome and Introductions

Mr. Morrow welcomed all attendees. The CAB dedicated their meeting to Frank Connell, a former CAB member who was dedicated to the CAB and also to his community. Ms. Calderon introduced herself as the new Community Involvement Coordinator for the site.

2. Operation and maintenance updates for the groundwater treatment system and soil vapor extraction system- Kevin Snyder, Project Manager

Mr. Snyder initiated his presentation with an update of site events since the August 2009 CAB meeting. Mr. Snyder discussed with Mr. Morrow the method in which the groundwater system has removed 275.04 lbs. of perchloroethylene (PCE) from water so far. Ms. Schroeder inquired of the sampling schedule for the groundwater. Mr. Snyder responded that they were done randomly, depending on schedules and availability, but personnel do go out weekly to make sure the system is running properly. Ms. Schroeder questioned the noise level of the pumps used in the groundwater treatment system. In reply, Mr. Snyder stated that the pumps are 60-80 feet underground, so the noise level is muted. Ms. Schroeder inquired if rain effected the plume movement and Mr. Snyder stated not really, because of the depth of the groundwater where the contamination is located. Mr. Snyder and Mr. Morrow discussed a bacterium that naturally breaks down toxins and how they have been used historically. Mr. Snyder added that at this

site the proper environment for such an effort did not exist. Ms. Schroeder and Mr. Snyder discussed the carbon filter change and process, for the contaminants removed from the site. In response to Mr. Watts update request regarding the cleanup at the Texaco station near the site, Mr. Snyder stated that the gasoline cleanup was being overseen by the Underground Storage Tank (UST) division at ADEQ.

See attached presentation

3. *Call to the public- None

4. Acceptance or Changes to August 31, 2009 meeting minutes

Mr. Zorbas moved to accept the minutes as written. It was seconded by Ms. Schroeder and passed unanimously by the CAB.

5. CAB Co-Chair discussion and vote- Felicia Calderon, Community Involvement Coordinator

Ms. Schroeder motioned to elect Mr. Mendola as the new co-chair and Mr. Barquinero seconded. Mr. Barquinero motioned to elect Mr. Watts as the second co-chair and Ms. Perry seconded. Both Mr. Mendola and Mr. Watts were voted unanimously by the CAB as the new co-chairs.

6. Next Meeting Date and Agenda Discussion

A future CAB meeting was not scheduled and instead Ms. Calderon advised the CAB that she would contact them to schedule their next meeting once significant site material existed. Future agenda topics to include a site update. A short discussion took place regarding the possibility of merging two CABs, Central and Camelback and 7th Avenue and Bethany Home Road. Ms. Calderon stated that she would bring this proposal back to management to explore this further and would report back to the CAB.

7. Adjournment

Ms. Schroeder moved to adjourn. It was seconded by Mr. Watts.

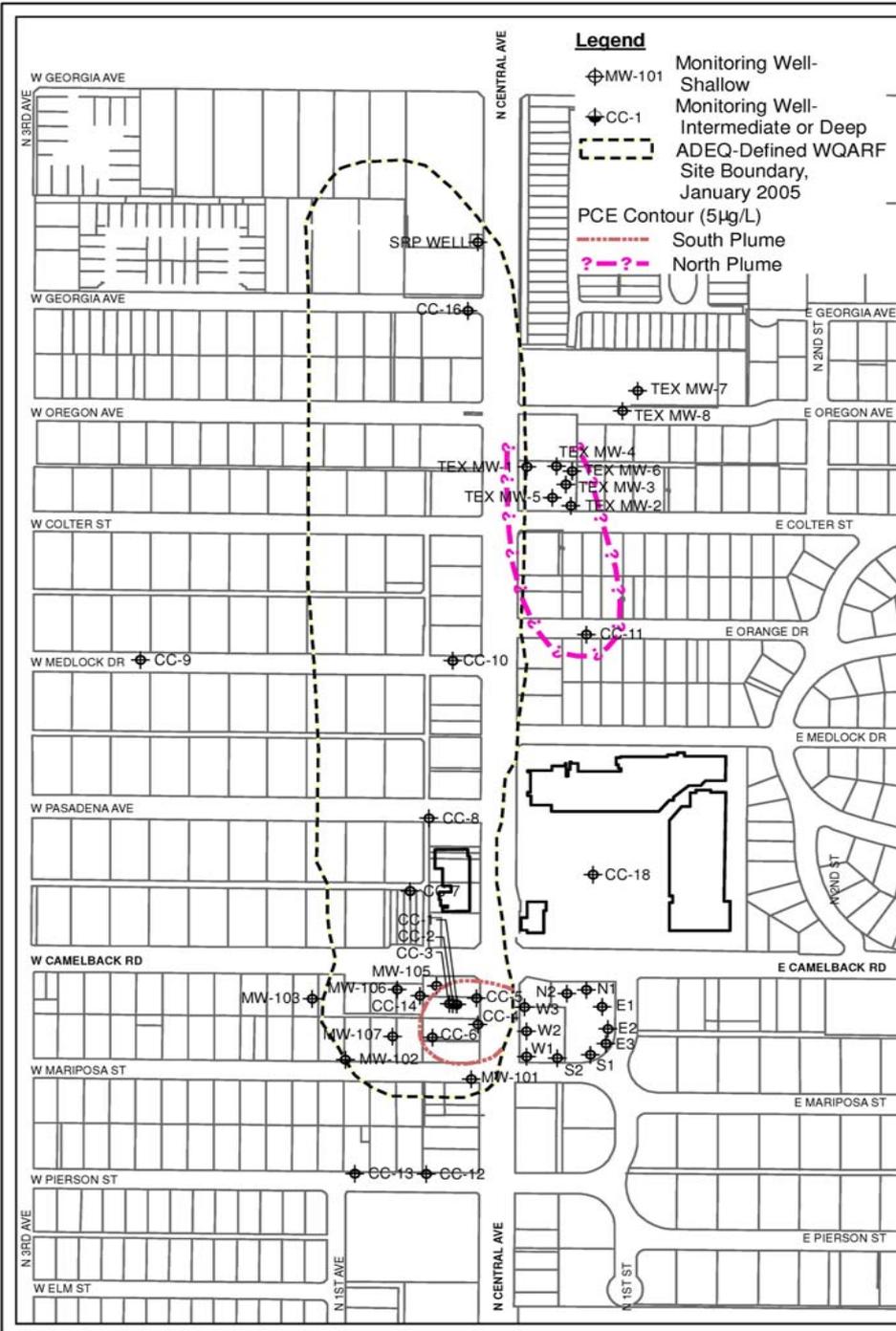
Central and Camelback WQARF Site

Jennifer Edwards Thies, Unit Manager

Felicia Calderon, Community Involvement Coordinator

Kevin Snyder, Project Manager

October 18, 2010 6:00pm



Events Since August 2009 CAB Meeting

- ◆ The SVE system has removed 2,860 lbs of PCE from soil so far.
- ◆ The groundwater system has removed 275.04 lbs of PCE from water so far.
- ◆ Groundwater samples were collected from the groundwater monitor wells during June 2010.
- ◆ Groundwater samples were collected from the extraction wells and groundwater treatment system quarterly and monthly, respectively. Vapor samples were collected from the SVE system monthly.
- ◆ SVE system and groundwater treatment system will continue to operate as presently funded.

Events Since August 2009 CAB Meeting

- ◆ Because of budget cuts to the project for fiscal year 2009 and fiscal year 2010, ADEQ prepared all of the reports for the Central & Camelback WQARF Site during this time frame. Hydro Geo Chem, Inc. is still conducting site activities to keep remediation systems operational.
- ◆ ADEQ has prepared the following reports since the last CAB meeting:
 - Operation & Maintenance Quarterly Report, Third Quarter 2009, Soil Vapor Extraction System – Early Response Action
 - Quarterly Groundwater Monitoring Report, July Through September 2009, Remedial Investigation
 - Operation & Maintenance Quarterly Report, For Groundwater Treatment System, Third Quarter 2009, Early Response Action
 - Operation & Maintenance Quarterly Report, Fourth Quarter 2009, Soil Vapor Extraction System – Early Response Action
 - Quarterly Groundwater Monitoring Report, October Through December 2009, Remedial Investigation
 - Operation & Maintenance Quarterly Report, For Groundwater Treatment System, Fourth Quarter 2009, Early Response Action
 - Operation & Maintenance Quarterly Report, First Quarter 2010, Soil Vapor Extraction System – Early Response Action
 - Quarterly Groundwater Monitoring Report, January Through March 2010, Remedial Investigation
 - Operation & Maintenance Quarterly Report, For Groundwater Treatment System, First Quarter 2010, Early Response Action
 - Operation & Maintenance Quarterly Report, Second Quarter 2010, Soil Vapor Extraction System – Early Response Action
 - Quarterly Groundwater Monitoring Report, April Through June 2010, Remedial Investigation
 - Operation & Maintenance Quarterly Report, For Groundwater Treatment System, Second Quarter 2010, Early Response Action

Groundwater System Update

- ◆ EW-1 and EW-2 pumps are only pumps currently in operation.
- ◆ EW-3 and EW-4 were shutdown because of low PCE concentrations and to reduce operation costs.
- ◆ Groundwater system was shutdown from January 6 To March 2, 2010 because of SRP Canal Dry-out and budget reductions/could not cover costs to dispose water into City of Phoenix sanitary sewer.

Analytical Results From Groundwater Treatment System Extraction Wells

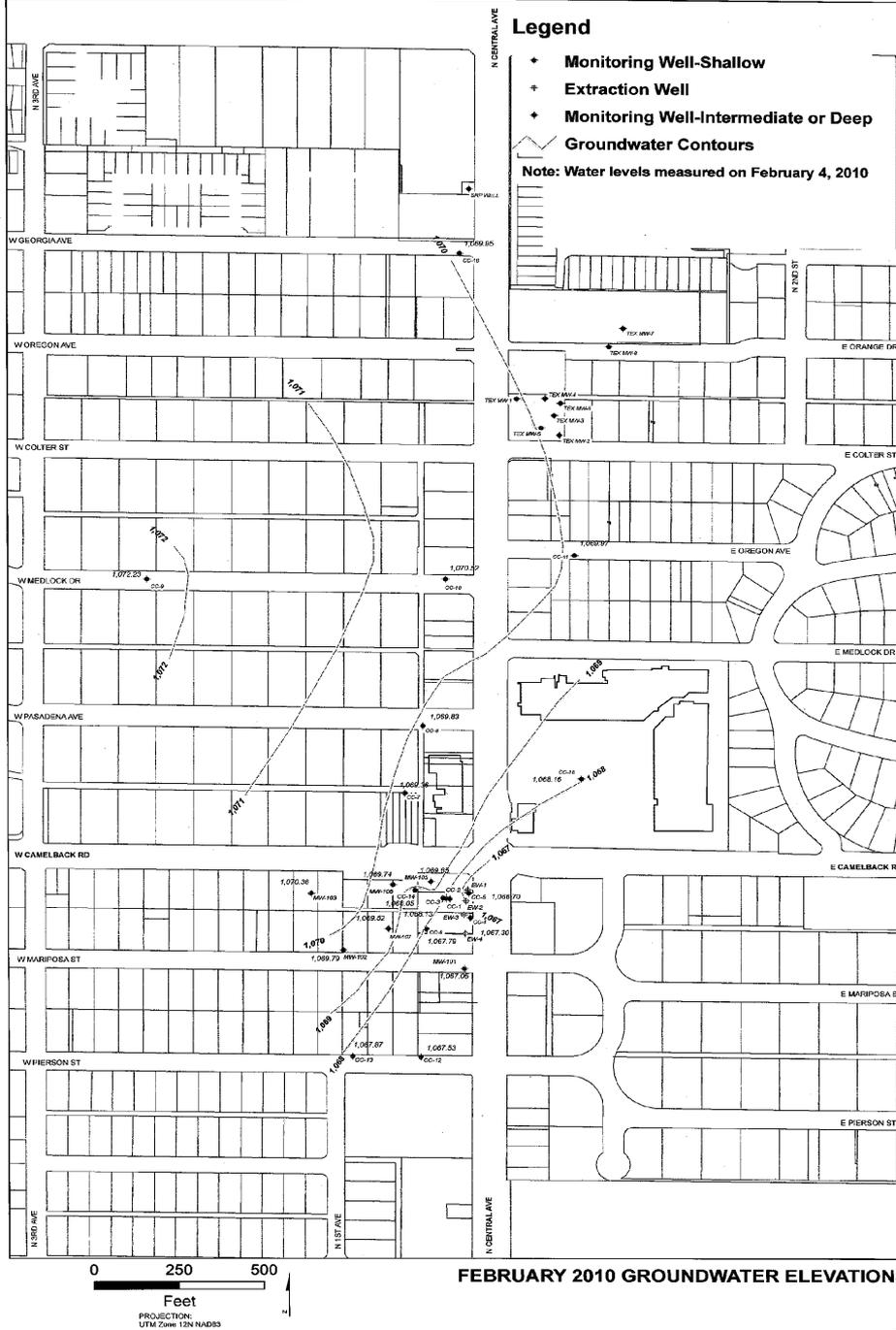
- ◆ Currently Only Extraction Wells EW-1 and EW-2 Are Operating and Are Sampled
 - Extraction Well EW-4 was shutdown on January 20, 2009
 - Extraction Well EW-3 was shutdown on May 6, 2009
 - Extraction Well EW-2 was shutdown on May 20, 2009 and restarted on October 29, 2009

PCE Concentrations In Extraction Well Samples

WELL Number	Sept. 2009	Jan. 2010	March 2010	June 2010
EW-1	31	22	10	8.0
EW-2	Not Sampled	7.4	19	23
EW-3	Not Sampled	Not Sampled	Not Sampled	Not Sampled
EW-4	Not Sampled	Not Sampled	Not Sampled	Not Sampled

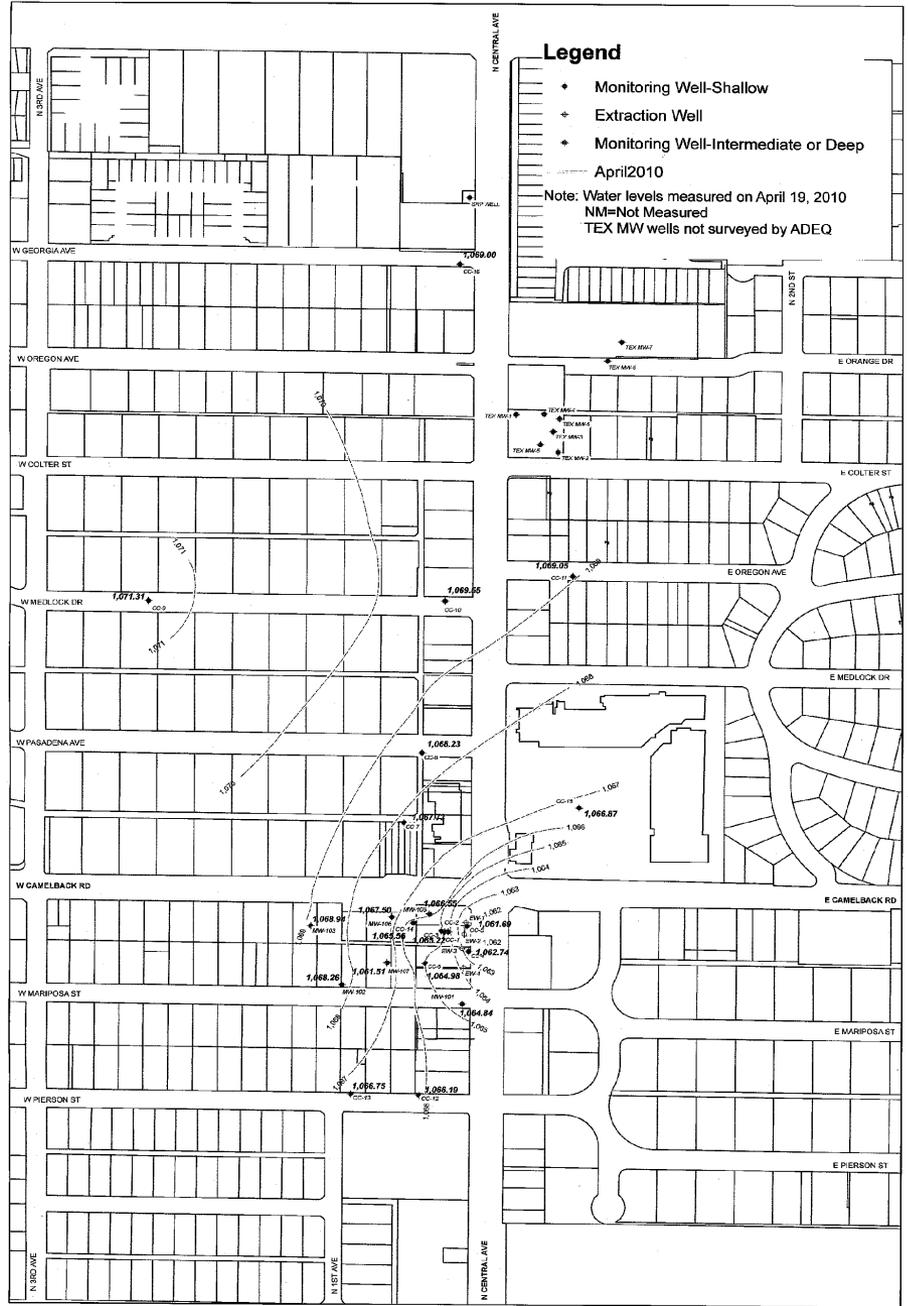
Operation & Maintenance Statistics for the GW Treatment System

Quarter	Gallons Treated	Percent Operational	VOC/PCE Removed (Lbs.)
3 rd Qtr 2009	2,874,300	95.1%	0.96/0.72
4 th Qtr 2009	6,697,600	100%	1.68/1.20
1 st Qtr 2010	2,056,200	37.5%	0.41/0.29
2 nd Qtr 2010	6,001,000	100%	1.23/0.87
3 rd Qtr 2010	3,860,318	100%	0.90/0.66



FEBRUARY 2010 GROUNDWATER ELEVATIONS

Figure 6



APRIL 2010 GROUNDWATER ELEVATIONS

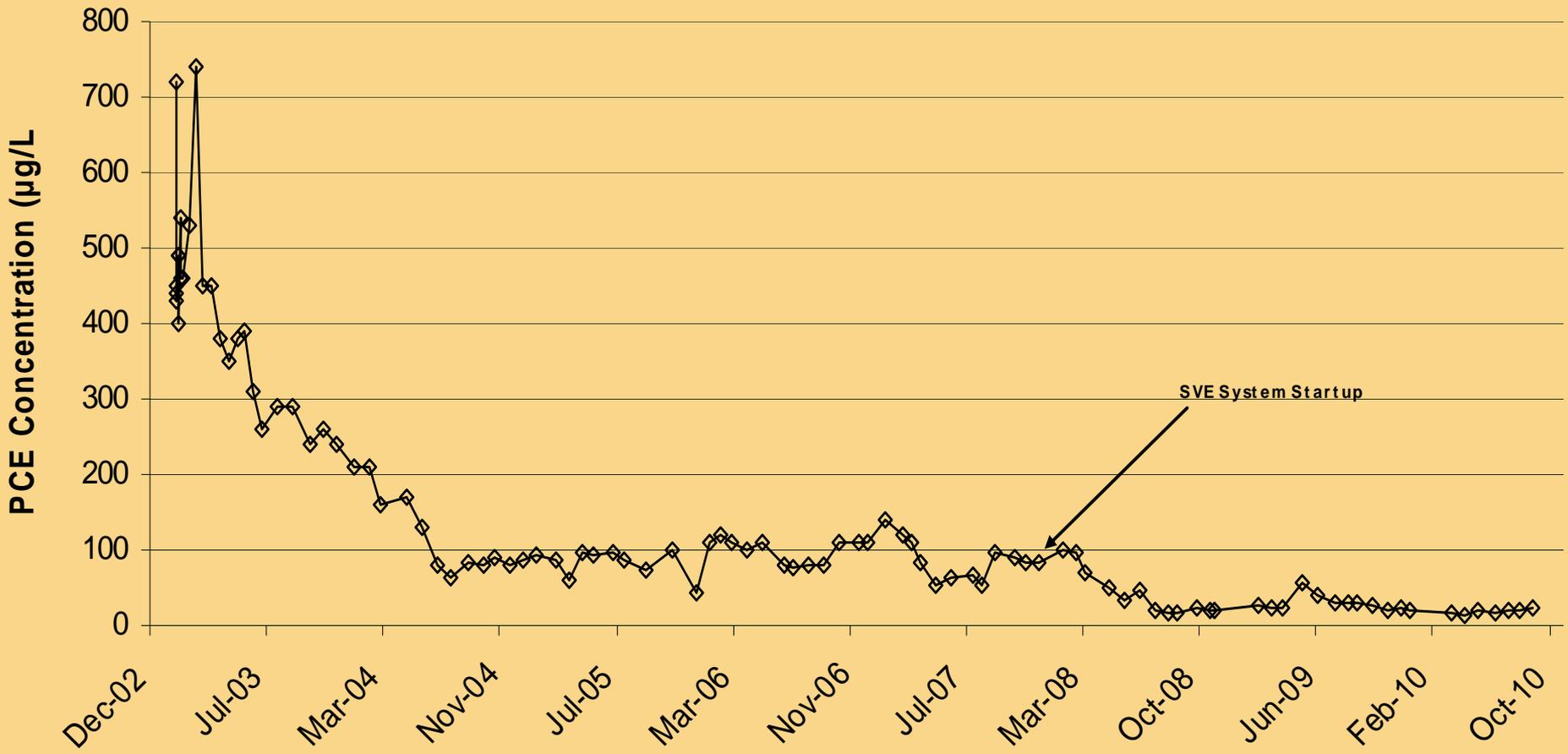
Figure 3

Groundwater System Update (cont.)

- ◆ A total of **275,024,878** gallons of GW has been pumped, treated and discharged as of 3rd qtr 2010.
- ◆ A total of approximately **310.84** lbs of VOCs has been removed. **275.04** lbs were PCE.
- ◆ VOC concentrations for influent samples ranged during 3rd qtr. 2009 through 3rd qtr. 2010:

<u>Benzene</u> : <0.50 µg/L	(AWQS – 5µg/L)
<u>Chloroform</u> : 2.7-4.4 µg/L	(AWQS – 100 µg/L)
<u>cis-1,2-DCE</u> : <0.50-0.89 µg/L	(AWQS - 70 µg/L)
<u>PCE</u>: 15-31 µg/L	(AWQS - 5 µg/L)
<u>TCE</u> : 2.6-5.5 µg/L	(AWQS - 5 µg/L)
<u>1,2-DCA</u> : <0.50 – 0.81 µg/L	(AWQS - 5 µg/L)

PCE Influent Changes with Time



Notes:
AWQS=5 µg/L
Detection limit =0.5 µg/L

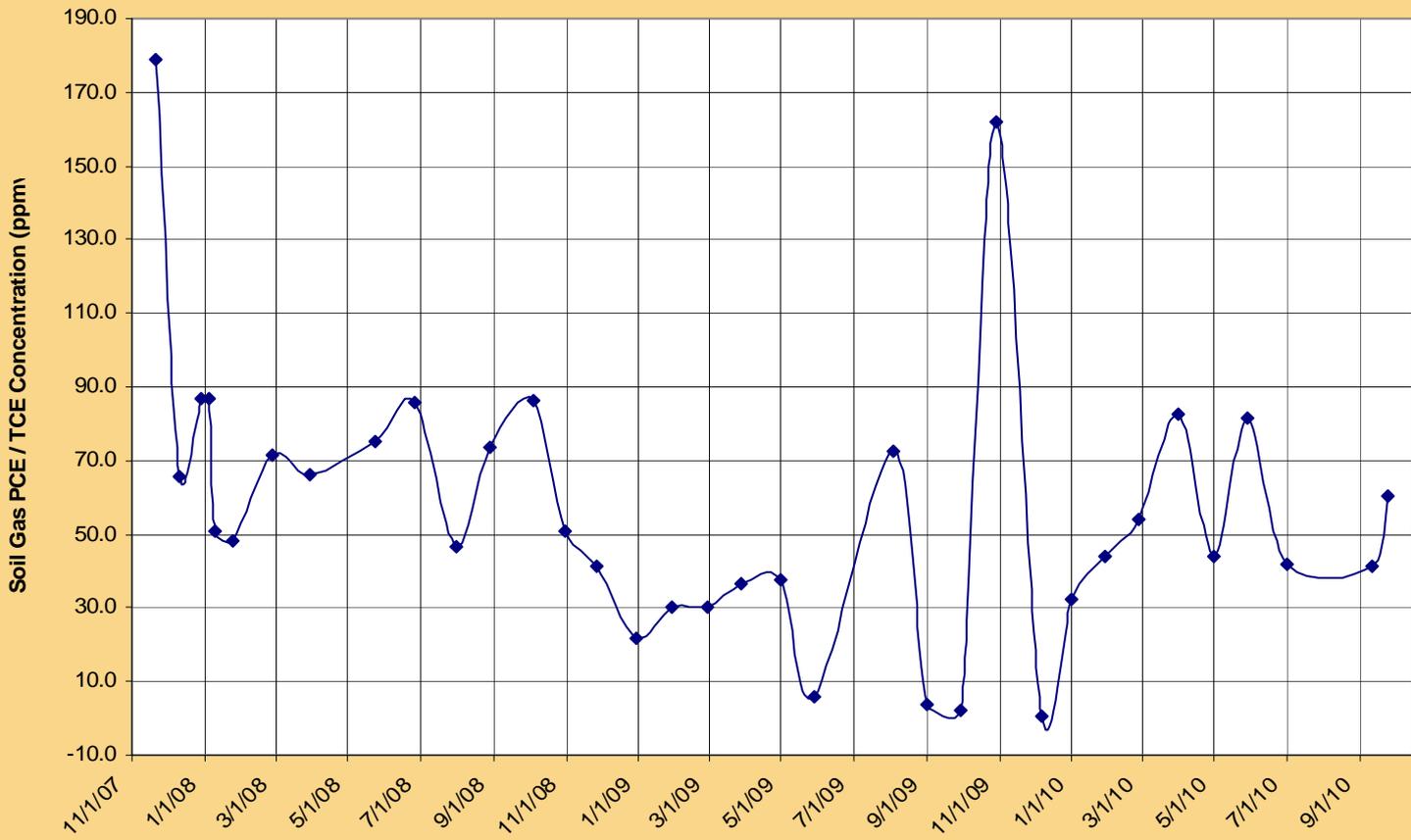
SVE (soil) system update

- ◆ System Startup on Nov 20, 2007.
- ◆ Because of a drop in soil vapor concentrations, system is operating on a 2 week on 2 week off schedule to increase efficiency of system.
- ◆ There were no equipment malfunctions causing the system to shutdown during the end of 2009 or the beginning of 2010.
- ◆ The system was shutdown on June 30, 2010 because of contracting/budgeting and the need for a carbon filter change-out. The system was restarted on September 10, 2010.
- ◆ An estimated 2,860 pounds of PCE/TCE have been removed by the SVE system through September 2010 since it was started in November 2007.

Operation & Maintenance Statistics for the Soil Vapor Extraction (SVE) system

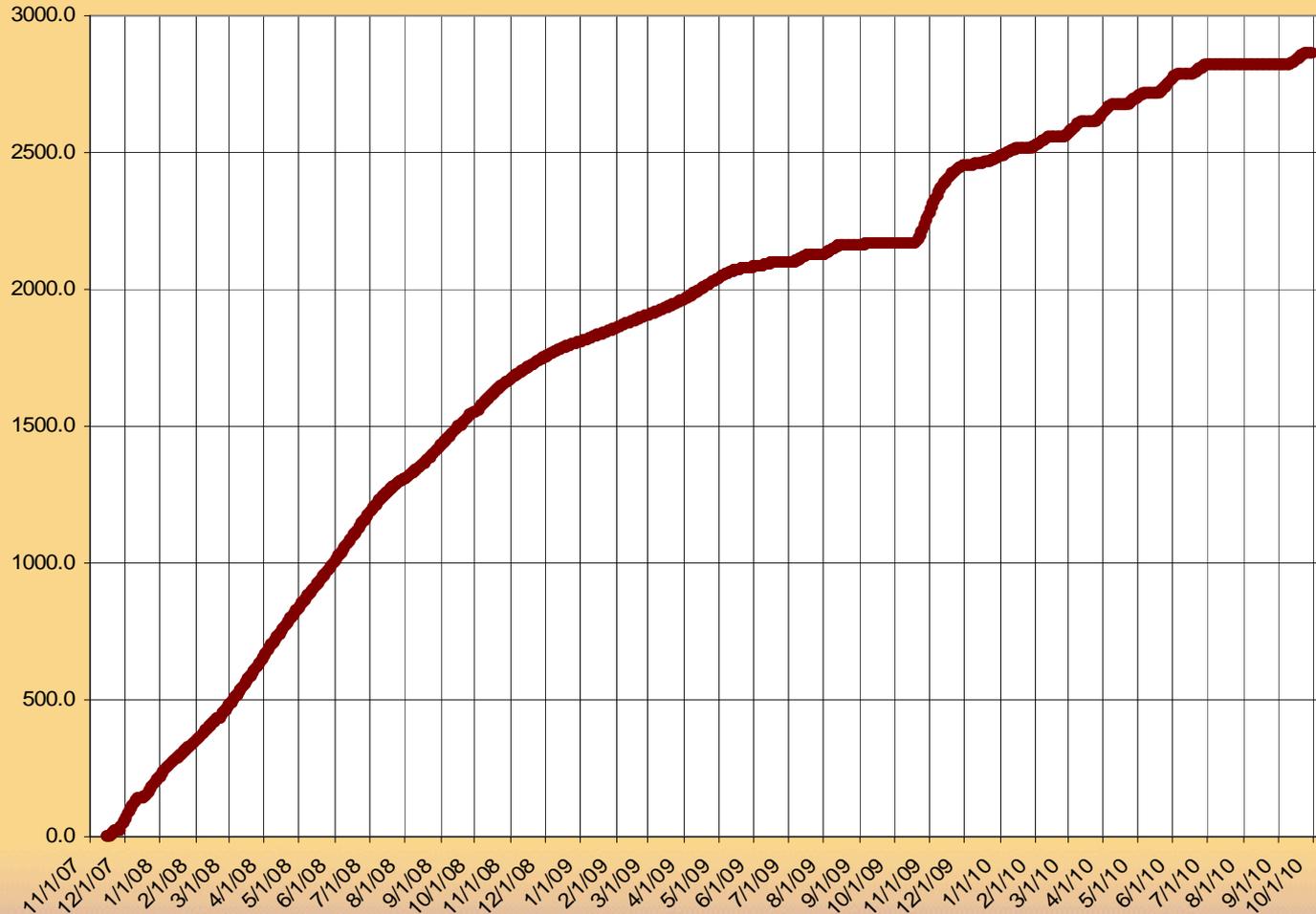
Quarter	Percent Operational	PCE/TCE Removed (Lbs.)
3 rd Qtr 2009	65%	55.3
4 th Qtr 2009	78%	242
1 st Qtr 2010	55%	155
2 nd Qtr 2010	54%	182
3 rd Qtr 2010	15%	42

PCE Influent Changes with Time

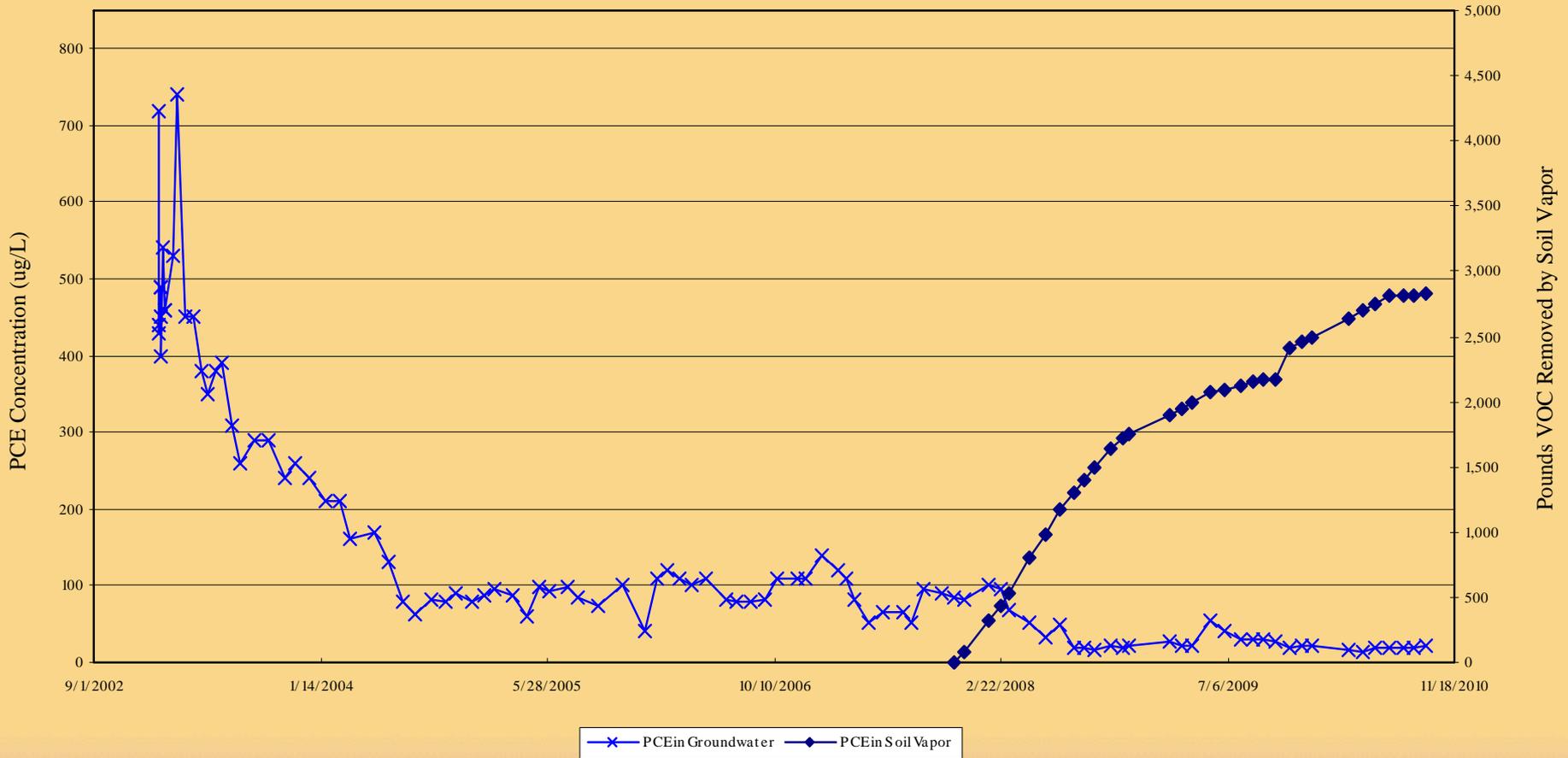


SVE RECOVERY WITH TIME

Cumulative PCE/TCE Recovery (lbs)



SVE RECOVERY vs GROUNDWATER INFLUENT



Future Planned Work

- ◆ Continue O&M Activities for both SVE and GW systems.
- ◆ Monitor water levels monthly and collect groundwater samples quarterly.