

FINAL

Meeting Minutes

Meeting Subject: Norwalk Tank Farm Restoration Advisory Board (RAB) Quarterly Meeting	Meeting Date: <u>31 July 2008</u> Meeting Time: 6:30 p.m. Meeting Place: Norwalk Arts & Sports Complex
RAB, PROJECT TEAM, AND OTHER ATTENDEES	
<u>RAB Community Members</u> E. Garcia B. Hoskins M. McIntosh (Co-Chair) T. Winkler	<u>Other Members</u> A. Figueroa (City of Norwalk) S. Hariri (DTSC) J. Holdren (City of Cerritos) J. Hu (RWQCB) Lt. Col. Ramer (DESC-AMW) (Co-Chair)
<u>Other Attendees</u> S. Chou (AMEC Geomatrix) J. Franz (Tetra Tech) R. Hassan (Parsons) M. Lucas (Parsons) L. Olmos (Office of Rep. Napolitano) K. Olowu (DESC) S. Osborn (KMEP) C. Slocum (Voit Dev. Co.) T. Whyte (URS)	<u>Acronyms:</u> CHHSLs..... California Human Health Screening Levels DESC-AMW.. Defense Energy Support Center Americas West DTSC Department of Toxic Substances Control GSA..... General Services Administration HHRA Human Health Risk Assessment KMEP Kinder Morgan Energy Partners LNAPL..... Light non-aqueous phase liquids MTBE Methyl tertiary-butyl ether OCCS Offsite Chemicals Cleanup Subcommittee OEHHA..... Office of Environmental Health Hazard Assessment 1,2-DCA..... 1,2-dichloroethane RAB Restoration Advisory Board RBCA..... Risk-Based Corrective Action RWQCB..... Regional Water Quality Control Board SVE..... Soil Vapor Extraction TPH..... Total petroleum hydrocarbons URS..... URS Corporation VOCs..... Volatile organic compounds WRD Water Replenishment District of Southern California
<u>Absentees</u> N. Matsumoto (WRD) W. Miller M. Pitta (KMEP) (Co-Chair)	
<u>Not Attending</u> Dr. Duran (OCCS) Dr. Landolph (OCCS)	
<u>BACKGROUND</u> DESC-AMW and KMEP are conducting environmental cleanup activities at the area in and around the former Defense Fuel Support Point Norwalk, also known as the Tank Farm, located at 15306 Norwalk Boulevard, Norwalk, CA. The RAB is an advisory committee of local citizens and project members that reviews and comments on documents relating to the environmental cleanup. All RAB meetings are open to the public and are scheduled quarterly on the last Thursday of the month at 6:30 p.m. in January, April, July, and October unless otherwise voted on by the RAB community membership.	

FINAL

MEETING MINUTES

31 July 2008

1. Introduction Steve Osborn, KMEP, Meeting Chair

Steve Osborn called the meeting to order at 6:38 p.m. Mr. Osborn introduced the guests attending the meeting, including Lucy Olmos from Representative Napolitano's office, Curt Slocum from Voit Development Company, and Jim Franz from Tetra Tech.

Mr. Osborn asked for comments on the draft minutes from the April 24, 2008, RAB meeting. Mary Jane McIntosh made a motion to accept the minutes as written. Lt Col Ramer seconded the motion. The minutes were approved without opposition.

2./3. KMEP Update Steve Osborn, KMEP, and Shioh-Whei Chou, AMEC Geomatrix, Inc.

Remediation Operations Update

Shioh-Whei Chou displayed a map of the remediation systems and indicated KMEP's cleanup areas: the Westside Barrier System, the South Central area, and the Southeast area. She also indicated DESC's cleanup system in the north-central area.

Ms. Chou said that KMEP's Soil Vapor Extraction (SVE) System has 30 vapor extraction wells in the South-Central Plume area (24 on-site and 6 off-site) and two vapor extraction wells in the Southeastern 24-Inch Block Valve area. During the second quarter 2008, approximately 225 gallons of fuel were removed by SVE. Approximately 452,800 gallons equivalent of fuel have been removed from the soil and destroyed by catalytic and thermal oxidation since September 1995. The SVE system has operated for approximately 61,594 hours since September 1995. It operated continuously during second quarter of 2008 with the exception of being down a few days for an electrical disruption due to a tripped break at the main electrical panel. The SVE system operated for 87 percent of the time during the quarter. Ms. Chou showed a graph of the cumulative fuel hydrocarbons removed by vapor extraction, as well as a separate graph showing a closer look at the past six months of fuel removed by SVE.

She said that KMEP's Groundwater/Product Extraction System has 18 total fluids (product and groundwater) extraction wells and 2 groundwater extraction wells in the South-Central Plume area; 2 total fluids extraction wells in the Southeastern 24-Inch Block Valve area; and 3 groundwater extraction wells in the West Side Barrier area.

Total groundwater extracted during the second quarter 2008 included: 902,000 gallons from the South-Central Plume area; 141,000 gallons from the Southeastern 24-Inch Block Valve area; and 35,600 gallons from the West Side Barrier area. Total groundwater extracted since September 1995 includes: 29 million gallons from the South-Central Plume area; 8.7 million gallons from the Southeastern 24-Inch Block Valve area; and 26.9 million gallons from the West Side Barrier area. A total of 64.6 million gallons of groundwater have been extracted from all three areas, and 8,917 gallons of free product have been removed.

Ms. Chou said that the groundwater/product extraction system operated continuously during the second quarter of 2008 with the following exceptions:

- Operating intermittently due to a faulty water level sensor and controller in transfer tank
- Electrical disruption due to tripped breaker at main electrical panel (approximately 10 days), electrical components replaced on remediation systems
- Liquid phase granular activated carbon changeout (approximately 2 days).

The system operated for 40 percent of the time during the quarter. Ms. Chou also showed a graph of the cumulative groundwater and product extracted.

Planned Remedial Activities

Ms. Chou said that KMEP's planned remediation activities include:

- Continuing weekly system inspections

FINAL

MEETING MINUTES

31 July 2008

- Continuing data collection for monitoring and evaluation of remediation systems
- Continue to make adjustments to remediation wells to optimize remediation
- Collect data to evaluate bioremediation
- Shut down of the West Side Barrier system.

First Semi-Annual 2008 Groundwater Monitoring Event

Ms. Chou said that the first Semi-Annual 2008 Groundwater Monitoring Event was performed in April. One-hundred and fourteen wells were sampled, including five Exposition wells. In general, groundwater elevations decreased by approximately 1.5 feet since November 2007. No volatile organic compounds (VOCs) were detected in the Exposition wells, with the exception of chloroform, bromodichloromethane, and dibromochloromethane at low concentrations in well EXP-4. Free product was detected in well MW-15 (near the truck rack area) and well GMW-10. Free product was not detected in the intermediate block valve or southeastern areas.

Ms. Chou showed a map of groundwater elevations and free product in April 2008. She said that groundwater flow was generally towards the northwest. Free product was interpreted to be in the South-Central and North-Central areas. No free product was found in the southeast area. For comparison, Ms. Chou showed a map from April 2007. The groundwater flow generally remained the same between April 2007 and April 2008.

Ms. Chou said that in general, the lateral extents of TPH (total petroleum hydrocarbons), benzene, MTBE (methyl tertiary butyl-ether), and 1,2-DCA (1,2-dichloroethane) in the South-Central area were the same as other recent monitoring events. The lateral off-site extent of the south-central benzene plume appears to have decreased. Detected concentrations of 1,2-DCA were below the conservative risk-based clean up goal for 1,2-DCA (70 µg/L).

With the exceptions of MTBE in well MW-SF-1 in the south-central area and well PZ-5 in the southeastern area, the detected concentrations of MTBE were below the conservative risk-based cleanup goal for MTBE (40 µg/L). Based on 1,2-DCA and MTBE concentrations that have remained consistently below the risk-based cleanup goals in the West Side Barrier and in off-site wells west of the site, pumping of the three currently-active West Side Barrier wells will be discontinued.

Ms. McIntosh asked if there were some RWQCB criteria for monitoring after shutdown of the West Side Barrier system. Ms. Chou said that they will continue to monitor the area on a quarterly basis, during the Sentry Events and Semi-Annual monitoring events. She said the wells can be restarted if necessary.

Ms McIntosh asked about the 1,2-DCA detected in the northeast area. She was concerned that this was not near the 1,2-DCA plume. She asked that wells GMW-58 and 59 be retested for 1,2-DCA, to make sure there was no laboratory error. Curt Slocum said that it could have also been due to sampling contamination.

Mr. Slocum asked how groundwater elevation changes could affect concentration levels. Ms. Chou said that typically when groundwater increases, concentrations decrease, but the western wells do not change as much during groundwater fluctuations. Mr. Osborn said that there was less of a smear zone in the western area. Jeffrey Hu said that when groundwater levels fluctuate, concentration levels usually fluctuate as well.

Ms. Chou next showed animations displaying changes in the plumes over the years 2000 to 2008. First she showed a TPH plume map. The distribution of TPH in 2007 and in 2008 was in the same general area. The benzene plumes appeared in the same general areas in 2007 and 2008. The 1,2-DCA plume appeared in the same general area in 2007 and 2008, with the exception of detections along the eastern boundary. The MTBE plume extends farther offsite to the northwest in 2008 than in 2007. However, the area that extends offsite has low concentrations.

Ms. Chou said that the animations show that the plume footprints are relatively constant, but they do not show decreases in concentrations. Mr. Slocum said that at other sites in Southern California, they are seeing a lot of decreases, and then a large spike in concentrations. He said that groundwater elevation gains at other sites are not correlated to rains; he thinks it is due to stormwater pollution prevention. He predicts that

FINAL

MEETING MINUTES

31 July 2008

groundwater elevation gains will cause a 10 to 15 year increase in cleanup times at other sites in Southern California in general. Mr. Osborn said that at this site, they are pumping to lower the water table and to expose the smear zone, so that they can clean it up more effectively. Redwan Hassan said that in Norwalk, they see the greatest fluctuations in concentrations after it rains.

Ms. Chou then showed hydrographs for several wells in the South-Central area, with groundwater elevation and apparent product thickness from January 1990 to January 2008. She also showed hydrographs with benzene concentration data from January 2003 to January 2008. The MW-SF-1 hydrograph shows a groundwater elevation trend increasing over the past 10 to 20 years, and free product has decreased. There was a high groundwater level event in May 2005. The benzene in this well decreased during the high groundwater level event. In well MW-SF-4, groundwater elevations have been increasing and free product has been decreasing. Free product was most recently non-detect. This well is near the Intermediate 24-Inch Block Valve, which experienced a release in 2003. There are not a lot of benzene data, because the well was not sampled when it contained free product. In well GMW-O-14, there has been no free product detected since the mid-1990s. Groundwater levels have been increasing. Benzene levels have been gradually rebounding since the May 2005 high groundwater level event. In well GMW-O-3, benzene has been non-detect in the past two monitoring events.

Additional Assessments

Ms. Chou reviewed the objectives of the soil gas sampling and surface emission testing in the Southeastern 24-Inch Block Valve Area: to further assess the presence of volatile fuel constituents in soil gas and to evaluate potential surface emissions of volatile fuel constituents, if indicated by results of soil gas survey. Three soil vapor sampling locations (SG-1, SG-2, and SG-3) were completed in southwestern portion of Holifield Park on July 8, 2008 in coordination with the City of Norwalk. Soil gas samples were collected at 6 feet and 16 feet below ground surface at each location. Results indicate principal chemicals of concern were either not detected or were not detected above CHHSLs (California Human Health Screening Levels), and based on that, additional sampling is not required. The assessment report is due to be completed August 29, 2008.

Ms McIntosh next referenced the Groundwater Monitoring Report. She said that in the southeast area where wells GMW-36, GMW-39, and PZ-5 are located, there is a lot going on. She asked if this was due to the new remediation system improvements. Ms. Chou said that wells in the heart of the plume (near the smear zone) tend to show more changes in concentrations. Ms. McIntosh next asked about MTBE in well GMW-14, well GMW-18 in the northeast, and well GMW-59 near the Truck Rack. Ms. Chou said that in the northeast part of the site, there have been MTBE detections in the past. Mr. Hassan said that the DESC wells were not operating during the sampling, so they should not have had an affect on sampling results of those wells.

Ms. McIntosh also has a list of questions about when certain wells were last sampled. She said that she would email the list to KMEP. Ms. Chou said that some wells are sampled once per year, some twice, and some four times per year. Ms. McIntosh mentioned that wells GMW-7 was non-detect in May 1997 and then had high concentrations in December 2000, but then it was never retested. Mr. Osborn said that it could be a remediation well. KMEP will respond to Ms. McIntosh's email list when received.

Tracy Winkler asked if there were any problems as a result of the recent earthquake. Ms. Chou said that the equipment is to be inspected tomorrow.

4. DESC-AMW Update Redwan Hassan, Parsons

General Site Activities

Mr. Hassan said that the Semi-Annual Groundwater Monitoring Event was conducted April 14 through 19, 2008. Weed abatement began on April 22. On April 21, Parsons began the groundwater treatment system (GWTS) start-up, evaluation, testing. They optimized the GWTS to add capacity for the three new large diameter wells, which are located in the northwest, central, and northeast areas. From April 22 through June

FINAL

MEETING MINUTES

31 July 2008

30, they conducted weekly system inspections as part of the ongoing operations and maintenance. System performance and compliance sampling was conducted on April 22, May 1, 15 and June 5, 12, 19. Absorbent sock monitoring and change out was conducted April 28 and June 30. TPH field test sampling was conducted May 1 and May 15. They submitted the 1st Quarter 2008 NPDES (National Pollutant Discharge Elimination System) Discharge and Monitoring Report to RWQCB on May 15.

Holifield Park Investigation Status

Mr. Hassan said that Parsons submitted the revised supplemental investigation and groundwater remediation work plan to RWQCB on April 22, 2008. On June 11, they received approval to implement the work plan. The RWQCB initially requested two new wells in the Park. However, Parsons determined that they may be able to contain migration without adding the new wells. This would help to minimize disruptions to the Park. Therefore, they submitted an addendum to the revised work plan June 26. They initially received verbal approval from RWQCB to implement the addendum work plan, and then on July 30, they received the written approval. Mr. Hassan said he would give an update at the next meeting.

Remediation System Update

Mr. Hassan said that recent remediation system modifications include the replacement of the level control sensor system in the surge tank. They added manway to the top of the surge tank in order to maintain Air Quality Management District (AQMD) permit compliance. They added and routed a vapor hose to passively treat surge tank off-gas to a granular activated carbon (GAC) unit. They reconfigured the water inlet to the surge tank in order to reduce water agitation. They also raised the piping at the outlet of the groundwater system. These modifications were needed because they went from a low flow rate of pumping to a high flow rate. Therefore, they reconfigured the system to handle the increased capacity.

Mr. Hassan said that total groundwater extracted and treated in the second quarter 2008 was 83,650 gallons. Total groundwater extracted and treated since April 1996 was 42.9 million gallons. The GWTS operated manually during system evaluation and optimization period from April through May 2008. From June 3 onward, continuous operation commenced from wells GW-2 and GW-13 in the northwest corner and GW-15 in the eastern boundary area to contain northwest and eastern migration.

Mr. Hassan said the soil vapor extraction system was not in operation this quarter due to contractual issues. From April 1996 through June 2008, approximately 428,716 gallons of total hydrocarbon mass were removed. This includes approximately 215,865 gallons recycled and destroyed and an estimated 212,850 gallons of hydrocarbons destroyed due to enhanced biodegradation.

A detailed breakdown of the 215,865 gallons that has been recycled and destroyed includes:

- 55,567 gallons of free product recovered and recycled (including absorbent sock recovery). They are getting a residual sheen. A low level of product is being recovered.
- 1,400 gallons of dissolved-phase hydrocarbons recovered and treated through onsite granulated carbon treatment system
- 158,900 gallons of volatile hydrocarbons recovered through SVE and treated through onsite treatment system

Mr. Hassan next displayed a graph showing free product, free product and SVE, and the total mass removal including biosparging. The free product removal has been stable.

Historical Analytical Summary for Eastern Area

Mr. Hassan said that analytical summary tables have been prepared for wells GMW-57 through GMW-62 from March 2006 through April 2008 and include the following constituents: TPH as gasoline; TPH as fuel product; BTEX (benzene, toluene, ethylbenzene, and total xylenes) compounds; and Total BTEX. He said that 1,2-DCA is not reported here, but it is reported in the Semi-Annual report. Mr. Hassan then showed maps and graphs with sampling data from March 2006 through April 2008 for each well. Well GMW-57 has shown

FINAL

MEETING MINUTES	31 July 2008
<p>a drop in BTEX, with recent concentrations on the low end. TPH has fluctuated more, so they will continue to monitor this well. In well GMW-58, BTEX has been stable. There were much higher concentrations of TPH in earlier sampling results; concentrations are decreasing, so they will continue to monitor it. In well GMW-59, concentrations of TPH started high, but now sampling results are getting more stable. Well GMW-60 is the farthest east of these wells. Concentrations were high earlier, but now they are decreasing. Concentrations are fluctuating slowly. Well GMW-61 is next to well GMW-60. GMW-61 has shown decreases across the board. It is stabilizing. Well GMW-62 is a newer well at the Park. Concentrations started out high across the board in July 2007. Concentrations have dropped considerably and are getting stable.</p>	
<p>Parsons' conclusions for the analysis of concentration trends in wells GMW-57 through GMW-62 showed that TPH as gasoline decreased for all wells; TPH as fuel product decreased for 5 wells and increased at well GMW-57, although the overall TPHfp concentration at GMW-57 has decreased by about 50% from July 2006; Total BTEX decreased for 5 wells and increased at well GMW-59, although the overall BTEX concentrations at GMW-59 are lower now than one year ago. Mr. Hassan said that the increases found in GMW-57 and GMW-59 may both be anomalies.</p>	
<p><u>Planned Activities</u></p>	
<p>Mr. Hassan said that Parsons will continue the weekly system inspections, sampling, evaluation, and optimization of the remediation system. They will conduct an aquifer test in the eastern boundary area using existing wells, including the well in the Park. They will conduct a vapor respiration test and evaluation. They will also implement the addendum to the work plan at Holifield Park that will include additional groundwater investigation and two additional monitoring wells along the school near the fence.</p>	
<p>5. <u>Set Date and Agenda for Next Meeting</u></p>	
<p>The next quarterly RAB meeting will be held on Thursday, October 23, 2008, at 6:30 p.m. in the Norwalk Arts & Sports Complex. The agenda is to include well status answers; new KMEP maps; and remediation updates.</p>	
<p>6. <u>Public Comment Period</u></p>	
<p>Ms. Winkler asked if there was any update on the sale of the property. Mr. Slocum said that bids are due August 11, and the Air Force decision is expected in 30 days.</p>	
<p>Mr. Osborn adjourned the meeting at 7:36 p.m.</p>	

ACTION ITEMS		
Item	Responsible Party	Due Date
Responses to questions on status of wells	KMEP	TBD
New map displays	KMEP	10/23/08
Next Quarterly RAB meeting	All	10/23/08