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Meeting Minutes

Meeting Subject: Norwalk Tank Farm Restoration Advisory Board (RAB) Semiannual Meeting	Meeting Date: <u>28 January 2010</u> Meeting Time: 6:30 p.m. Meeting Place: Norwalk Arts & Sports Complex
RAB, PROJECT TEAM, AND OTHER ATTENDEES	
<u>RAB Community Members</u> B. Hoskins E. Garcia M. McIntosh (Co-Chair) T. Winkler	<u>Other Members</u> S. Defibaugh (KMEP) (Co-Chair) C. Emig (City of Cerritos) A. Figueroa (City of Norwalk) J. Hu (RWQCB)
<u>Other Attendees</u> S. Chou (AMEC Geomatrix) R. Hassan (Parsons) Col. Keyes (DESC-A) M. Lucas (Parsons) K. Olowu (DESC-WE) A. Padilla (AMEC Geomatrix) Mr. & Mrs. Putrick (Residents) P. Sunpanich (Office of Asm. Medoza) M. Tse (City of Norwalk) 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 NPDES..... National Pollutant Discharge Elimination System 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 TBA..... Tert-butyl Alcohol TPH..... Total petroleum hydrocarbons URS..... URS Corporation VOCs..... Volatile organic compounds WRD Water Replenishment District of Southern California
<u>Absentees</u> N. Matsumoto (WRD) Lt. Col. Ramer (DESC-AMW) (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 surrounding the former Defense Fuel Support Point Norwalk, also known as the Tank Farm, located at 15306 Norwalk Boulevard, Norwalk, CA. The Restoration Advisory Board (RAB) is an advisory committee of local citizens and project members that reviews and comments documents relating to the environmental cleanup. All RAB meetings are open to the public and are scheduled semiannually on the last Thursday at 6:30 p.m. in the months of January and July unless otherwise voted on by the RAB community membership.	

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Site Tour

Prior to the RAB meetings, RAB members met at the Tank Farm for a site tour. Redwan Hassan of Parsons led the tour to show the member's the Defense Energy Support Center's remediation system in the north-central area. Then Shioh-Whei Chou of AMEC Geomatrix led the members to the southeast area, to show them the 24-Inch Block Valve area, and then to the South Central area, to show them Kinder Morgan Energy Partners' (KMEP) remediation system.

1. Introduction Mary Jane McIntosh, RAB Co-Chair, Meeting Chair

Mary Jane McIntosh called the meeting to order at 6:38 p.m. She introduced some of the meeting attendees: Col Bill Keyes from DESC-Americas; Michael Koury from DESC in San Pedro; Kola Olowu from DESC headquarters; Mr. and Mrs. Putrick, nearby residents; Patrick Sunpanich from Assemblyman Tony Mendoza's office; and Michelle Tse, who is a new employee of the City of Norwalk.

Ms. McIntosh asked for the discussion on the semiannual meeting proposal to be delayed until the end of the meeting.

Ms. McIntosh asked for comments on the draft minutes from the October 29, 2009, RAB meeting. Bob Hoskins made a motion for the minutes to be accepted as written. Steve Defibaugh seconded the motion. The minutes were approved without opposition.

2. KMEP Update Steve Defibaugh, KMEP, Shioh-Whei Chou and Alex Padilla, AMEC Geomatrix, Inc.

Remediation Operations Update

Shioh-Whei Chou showed a map of the remediation systems and pointed out the areas visited on the tour: DESC's remediation system in the Northern area; the Southeastern 24-Inch Block Valve cleanup area; and KMEP's remediation system in the South Central area.

Ms. Chou next discussed KMEP's Soil Vapor Extraction (SVE) System. She said it 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. She said that during the fourth quarter of 2009, approximately 78 gallons equivalent of fuel were removed from the soil and destroyed by catalytic oxidation. Approximately 454,637 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 68,721 hours since September 1995.

The SVE system operated continuously during the fourth quarter of 2009 with the exception of being shut down for the following:

- Approximately 12 days to facilitate groundwater monitoring
- Approximately 12 days total due to a burnt out motor starter. The motor starter was replaced and the system was restarted on November 19, 2009
- Approximately one day due to a blown fuse. The fuse was replaced and the system was restarted on December 10, 2009.
- On two occasions due to undetermined causes.

The SVE system operated 81 percent of the time during this quarter and was 89 percent operational excluding planned shutdowns. Charles Emig asked if the system otherwise runs 24/7. Yes, replied Ms. Chou.

The next two slides provided by Ms. Chou were graphs showing a summary of cumulative fuel removed by SVE to date. The first graph indicates that over 450,000 gallons of fuel were removed from September 1995 through December 2009. The second graph shows the cumulative fuel removed by vapor extraction between June 2007 and December 2009.

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Ms. Chou next discussed KMED's Groundwater/Product Extraction System. This system consists of 20 wells including 18 total fluids (product and groundwater) extraction wells and 2 groundwater extraction wells in the South-Central Plume area. There are 2 total fluids extraction wells in the Southeastern 24-Inch Block Valve area. Operation of the West Side Barrier system was discontinued in August 2008.

Ms. Chou said that for the fourth quarter of 2009, total groundwater extracted includes 865,660 gallons from the South-Central Plume area and 4,494 gallons from the Southeastern 24-Inch Block Valve area. She stated total groundwater extracted since September 1995 includes: 40.1 million gallons from the South-Central Plume area; 9.68 million gallons from the Southeastern 24-Inch Block Valve area; and 26.9 million gallons from the West Side Barrier area. A total of 76.7 million gallons of groundwater has been extracted from all three areas, and 8,917 gallons of free product have been removed.

Ms. Chou stated that the Groundwater/Product Extraction System operated continuously during the fourth quarter of 2009 with the exceptions of being shut down for the following:

- Approximately three days to facilitate quarterly groundwater/product level gauging of the remediation wells. The system was restarted on November 9, 2009.
- The system was shut down on November 30, 2009 to evaluate selenium concentrations in the groundwater extraction wells. The system remained shutdown for the rest of the quarter pending further evaluation of selenium concentrations in groundwater.
- Approximately five days total due to undetermined causes.

The system operated for 61 percent of the time during the fourth quarter. It was operational for 91 percent of the time, excluding shutdowns for gauging for the semiannual monitoring event and for selenium evaluation. Ms. Chou next displayed a graph that shows cumulative product extracted at 9,000 gallons and extracted water at over 75,000,000 gallons collected at the site since 1996 from the various locations: the Southeastern 24-inch Valve area, the Westside Barrier area, and the South-central area. Mr. Emig asked if the wells have been in the same location over the time shown on the graph. Mr. Defibaugh replied yes, but some additional wells have been added over time. Mr. Emig also asked if KMED has tried increasing the pumping rates, or doing something different, to try to increase extraction. Mr. Defibaugh said that there are trade-offs involved. They are also evaluating different types of pumps.

Selenium Evaluation

Ms. Chou said KMED's remediation system discharges water to Coyote Creek under a NPDES (National Pollutant Discharge Elimination System) permit. She said that selenium was detected above the average monthly discharge limit (AMEL) of 4.1 micrograms per liter ($\mu\text{g/L}$) in a sample of treated groundwater collected on November 3, 2009. The RWQCB was notified within 24 hours of receiving the result. Additional samples were collected in accordance with the NPDES permit and conversations with the RWQCB. The average of the selenium results for samples collected in November 2009 was 5.2 $\mu\text{g/L}$. The system was shut down on November 30, 2009 while the distribution of selenium concentrations was investigated. Groundwater samples from 30 individual extraction wells were collected in December 2009. Results indicated that selenium concentrations ranged from non-detect (reporting limit of 1.00) to 12.30 $\mu\text{g/L}$. Based on the results of the December 2009 sampling, nine wells with selenium concentrations below the AMEL will be operated beginning in early February 2010 while selenium evaluation continues. Selenium concentrations will be monitored weekly, pursuant to the NPDES permit, and other pumps will be restarted as appropriate.

Ms. Chou said that selenium is a naturally occurring constituent in groundwater. The maximum contaminant level (MCL) for selenium in drinking water is 50 $\mu\text{g/L}$; treatment technologies for reducing selenium concentrations down to our 4.1 $\mu\text{g/L}$ discharge limit are limited. Management of selenium in extracted groundwater discharge is a complex problem that many sites are trying to address. KMED is continuing to evaluate options to manage selenium at the site.

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Mr. Emig asked if it would be possible to get a waiver from the RWQCB. Jeffrey Hu of the RWQCB said that there are other sites out there with similar issues. The discharge limit is designed to protect ecological resources. There is little room for RWQCB to change this limit. There are certain things they can do, like evaluate the toxicity. However, it would require a change in the RWQCB's Basin Plan, which would be a very lengthy process. Mr. Defibaugh said they had a spike about a year ago, so it could be a seasonal occurrence. They are looking at options, but some are very costly. He said that there are no proven technologies to get down to the 4.1 µg/L discharge limit. Ms. Chou said that most of these technologies are still in the pilot test stages. Ms. McIntosh said she is concerned with shutdowns and delays and requested to be notified when they find a solution. Mr. Defibaugh said they hope to have the TFE/GWE system going again within two weeks, and possibly as soon as Monday.

TFE/GWE System Maintenance

Ms. Chou said that while the TFE/GWE (Total Fluids Extraction/Groundwater Extraction) system is off, KMEP has been reviewing and is currently implementing several maintenance and upgrade activities to improve the operation of and to facilitate future monitoring of the system. These activities include:

- Cleaning and repairing TFE pumps,
- Rehabilitating extraction wells,
- Replacing components of the groundwater manifold, and
- Replacing conveyance piping in certain areas, such as the piping connecting the southeast area wells to the treatment system.

System restart is anticipated within two weeks. These activities increased the TFE/GWE system downtime from one month to two months, but are anticipated to decrease future downtime and increase performance. Steve Defibaugh added that it would be easier to get samples off the pumps now. Ms. Chou said that flow totalizer maintenance formerly took place semiannually but would now be conducted quarterly. They plan to check pump operation monthly now instead of semiannually. Pump maintenance, which formerly took place as needed, will now take place semiannually. In addition, these planned maintenance activities will occur more frequently as needed.

Planned Remediation Activities

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

- Continue SVE in the South-Central and Southeastern areas.
- Restart TFE and GWE in the South-Central and Southeastern areas. This may occur next week (the week of February 1st).
- Implement updated maintenance schedule.
- Continue to monitor concentrations of dissolved 1,2-dichloroethane (1,2-DCA) and methyl tertiary-butyl ether (MTBE) in western area, in case they need to restart the West Side Barrier system.
- Continue data collection for monitoring and evaluation of remediation systems.
- Evaluate selenium management options.
- Evaluate groundwater capture zones and adjust pumping configurations as appropriate.
- Continue adjustments to remediation wells to optimize remediation.

Additional Assessment Update

Ms. Chou stated that assessment work in the Holifield Park began in 2007 and included soil, soil vapor, and groundwater sampling. The Department of Toxic Substances Control (DTSC) requested the investigation be conducted up to the nearby Dolland Elementary School. One boring (B-122) was drilled near the off-site 24-inch block valve. More samples were taken in 2008 (CPT-1 and CPT-2) to delineate groundwater impacts. CPT-1 was non-detect (ND). TBA was detected in CPT-2 at 43 to 47 feet below ground surface. Sampling stopped at this depth, which was right at the top of the Bellflower aquitard.

Ms. Chou said that per RWQCB request, a supplemental assessment was conducted in November 2009 to:

- Verify the composition of sediments comprising the Bellflower aquitard in the area; and

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- Assess groundwater quality in the Exposition aquifer in the hydraulically downgradient vicinity of previous sample location CPT-2.

Assessment activities included lithologic assessment using sonic drilling methods and soil and groundwater sampling at a location (GB-18) approximately 170 feet southeast of previous sampling location CPT-2 and approximately 20 feet east of previous sampling location CPT-1. The sampling took place in the southwest area of Holifield Park. Continuous core soil samples were logged by a professional geologist, and soil samples were submitted for laboratory analysis. A discrete-depth groundwater sample was collected from the upper part of the Exposition aquifer and analyzed for total petroleum hydrocarbons as gasoline (TPHg), TPH as free product (TPHfp), benzene, toluene, ethylbenzene, and total xylenes (BTEX), and fuel oxygenates.

Ms. Chou said that the lithologic assessment confirmed the depth and presence of the interpreted Bellflower aquitard from approximately 47 to 81 feet below ground surface. Physical and hydraulic properties of the sediment indicate the aquitard is composed primarily of silts and clays which impedes downward vertical flow of groundwater. Analytical results for the discrete-depth groundwater sample collected from the Exposition aquifer show no groundwater impact to the Exposition aquifer. Mr. Defibaugh said that CPT-2 was backfilled after the sampling. The sampling was conducted through an access agreement with the City of Norwalk. Ms. Chou also showed a map of the sampling area, a photograph of the sonic drill rig, and a photograph of the continuous core samples. Ms. McIntosh asked if the results of this assessment allayed the RWQCB concerns. Mr. Hu said yes, RWQCB concerns were allayed.

Joint Capture Zone Analysis Update

Ms. Chou said that KMEP and DESC are performing capture zone analyses for groundwater extraction at various parts of the site.

- KMEP is reviewing the pumping configuration and modeled hydraulic capture of remedial extraction in the south-central and southeastern areas
- Capture zone analyses will be performed using WinFlow, a two-dimensional analytical model.

Preliminary simulations performed for extraction wells in the southeastern area indicate a predicted hydraulic capture extending to GMW-O-18 under a pumping scenario of 3 gallons per minute (gpm) at GMW-O-15 and 2 gpm at GMW-36. Ms. Chou showed a map indicating that the predicted capture area extends south of the site to Cheshire Street.

Individual well flow rates from GMW-36 and GMW-O-15 will be measured, and the pumps will be adjusted until the recommended flow rates are observed. Simulated results will be checked by measuring and contouring drawdown in wells and piezometers in the field after at least six months of pumping and comparing the measured drawdown to the drawdown predicted in the model.

Mr. Defibaugh said that they have done similar simulations for other areas in the past. Ms. McIntosh said that this area was chosen because remediation has been difficult here. Mr. Emig asked if you could insert a dye or tracer to see if it was working. Mr. Defibaugh that it could be done, but not easily. Ms. Chou said they would also monitor drawdown in nearby wells and then adjust the pumping rates if needed.

Mr. Emig suggested distributed the PowerPoint handouts in advance of the meeting, if possible, so RAB members could have more time to review it prior to the discussions at the meetings.

3. DESC-AMW Update Redwan Hassan, Parsons

General Site Activities

Redwan Hassan said that activities conducted in the past three months included:

- Weed abatement and debris cleanup around the area near the gate in October 2009
- Plumbing repair in guards building
- Electrical repair/replacement of lighting around the gate and the A/C unit in the guards building
- 2nd semiannual 2009 groundwater monitoring event, October 15 through 27

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- Prepared and submitted NPDES 3rd Quarter 2009 Discharge Monitoring Report (DMR), November 13
- Site-walk with City of Cerritos, November 19
- Vapor sample collected from surge tank headspace for AQMD permit application, December 24.

Remediation System Update

Mr. Hassan next discussed the remediation system update and stated that Parsons has performed weekly inspections on the DESC remediation system. System performance and compliance sampling was conducted on October 1, 29, November 5, 19, 25, and December 18. The groundwater treatment system (GWTS) granular activated carbon (GAC) change outs (GAC-1 & GAC-2) were completed on October 6. On October 12, the GWTS was shut down for gauging GW-15 (an extraction well on the east side) and GW-16 to assess effect of pumping in north-eastern area. The system remained off for the semiannual groundwater monitoring (GWM) event.

The vapor extraction system panel was delivered and installed on October 9. The control valves at GW-2/GW-3 were replaced on November 16. The strainer and sampling valve at well GW-16 were replaced on November 18. On December 29, they repaired the GW-2/GW-13 relay and resumed extraction from these wells. Onsite programming of PLC for soil vapor extraction system (SVES) was also completed.

Mr. Hassan then gave the overall operations summary for the remediation system. He said that 948,040 gallons of groundwater were extracted and treated in the fourth quarter of 2009, and 48.3 million gallons were extracted and treated since the system startup in April 1996. The SVES remained out of operation. The vapor extraction system upgrade was completed, and startup is pending AQMD (Air Quality Management District) permit approval. From April 1996 through December 2009, 428,722 gallons of total hydrocarbon mass were removed. Further break down includes approximately 215,870 gallons recycled and destroyed through groundwater and vapor extraction, and an estimated 212,851 gallons of hydrocarbons destroyed due to enhanced biodegradation.

Mr. Hassan said that no hydrocarbons were destroyed in the quarter due to the fact that the SVES remained inoperable. In addition, biosparging was not conducted as this technology needs to operate concurrently with the SVES. The GWTS that is currently operating is primarily for plume containment, not hydrocarbon mass removal. Mr. Defibaugh asked if Parsons still had a thermal oxidizer permit. Mr. Hassan said no, that they switched from the thermal oxidizer to carbon, which is more economical for the current impacts in soil.

The GWTS was on from September 30 through December 31 except for the following periods:

- September 30 – October 6: pending GAC change-out
- October 9 – November 2: to determine effect of operation of GW-15 & GW-16, then the 2nd Semiannual GWM event
- November 18 – November 23: pending MYCELX replacement and bag filters change-out
- November 30 – December 14: pending bag filters change-out

Mr. Hassan said that was about a total of 40 days offline, mainly for maintenance and change-outs of filters and carbon. Mary Lucas said that they have ordered the carbon ahead of time for future change-outs, which should help reduce the down time for change-outs from two weeks to three to four days.

Mr. Hassan next showed a map of the DESC remediation system layout. He pointed out the extraction wells in the northwest area which are used to prevent offsite plume migration. Then he pointed out the wells on the eastern boundary, the sparge points, the vapor extraction line to the Truck Fill Station, and the four horizontal SVE wells.

Additional Investigation Update

Mr. Hassan said that the Supplemental Investigation Report for Truck Fill Station (TFS), Water Tank, and Northeast (NE) Settling Pond Areas was submitted November 30, 2009. The report indicates that soil at the TFS (including the pump house to the south) and the water tank areas are still highly impacted. Soil at the NE

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corner shows minor impacts: TPH as JP-5, MTBE, and TBA (tert-butyl alcohol) were not detected; however, TPHg was detected at 0.35 mg/kg and benzene was detected at 1.9 µg/kg. Mr. Hassan next showed these three locations on a site map.

After review of the results and discussions with DESC, Parsons recommended the following:

- Impacted soil plumes still need to be defined at all areas
- Work plan addendums (which will need RWQCB approval) will be forth-coming to include the following activities:
 - NE corner: GORE survey is proposed to identify hot-spot soil gas chemistry then additional DPT (direct push technology) borings will be conducted to define impacted soil.
 - TFS: Step-out DPT sampling to the north, east, and south of the TFS; additionally soil around the former pump house will require step-out DPTs in all directions.
 - Water Tank Area: Step-out DPTs in all directions to define the limits of the impacted soil.
- Once impacted soil areas have been defined, remedial options will be evaluated for the next phase.

Mr. Hassan said the DPTs are like taking core samples. Samples are taken every five feet and sent to a laboratory for analysis. The continuous sampling also helps to learn the geology of the soil.

North-Eastern Area Groundwater Extraction Update

Mr. Hassan said that treatment began in the northeastern area as a result of plume migration towards Holifield Park. Groundwater extraction began from well GW-15 on April 22, 2009 (following the second quarter GWM event) and from GW-16 on July 22 (following the third quarter GWM event). Since the April and July 2009 GWM events, concentrations of TPH from October 2009 at GMW-59, GMW-60, and GMW-61 have decreased, and concentrations have increased at GMW-58 and GMW-62. All concentrations at GMW-63, GMW-64, and GMW-65 remain non-detect. Wells GMW-62, GMW-63, GMW-64, and GMW-65 are all located in the Park. Due to the pumping at wells GW-15 and GW-16, they are pulling the plume back on site.

From preliminary results from the 1st quarter 2010 Sentry GWM event, TPH has further decreased at all eastern area wells that were monitored except at GMW-62. The concentration graph indicates that the slight increase in TPH at GMW-62 is part of the normal seasonal fluctuations observed over the historical trend. Overall concentrations continue to decrease at GMW-62 and are lower than the July 2009 GWM event. Mr. Hassan next showed graphs with historical concentration trends for wells GMW-58, GMW-59, GMW-60, GMW-61, and GMW-62.

Joint Capture Zone Analysis Update

Mr. Hassan said that the tasks that Parsons have completed for the Joint Capture Zone Analysis include data compilation to get an initial data analysis and baseline groundwater contour mapping, and data gap identification for operational site-wide water levels and treatment plant influent concentrations. Current and upcoming tasks include:

- Site-wide synoptic water levels after pumping wells have been pumping for two weeks.
- Extraction well sampling to quantify both the mass loading to treatment plant and the spatial proportions of influent mass. This is to look at extraction well operations and see how they affect the treatment system.
- Groundwater model parameter review and collaboration.
- Groundwater contouring and analytical modeling (similar to what KMEP is doing).
- Procedural review and potential refinement.

Mr. Hassan said they have performed a similar analysis in the past for well GW-15, to see how it would affect the park. That analysis determined that if they added one additional well, they would be able to pull back the plume on-site. Therefore one new well was added in that case (GW-16).

Update on 5-Year Action Plan (DESC)

Mr. Hassan said that per Ms. McIntosh's request, an update on the 5-Year Action Plan was included in the

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presentation. He said that fuel thickness and extent of free product in wells have decreased considerably. They have not recovered any free product in a long time. Few wells contain free product. In October 2009, free product was only detected in eight wells in the north-central, north-eastern, and TFS areas with thicknesses ranging from 0.01 to 1.16 feet. In comparison, maximum thickness in December 2006 was 4.2 feet. They can turn the free product recovery wells back on if they see an increase in free product. For soil venting and biosparging, they have expanded the well network in various areas, including the water tank and southeast areas and once AQMD approval has been granted, expanded systems will be turned on.

Regarding groundwater extraction, they effectively decreased free product plumes. Extraction from the north-west corner and north-eastern area for containment has been effective. Off-site wells continue to show non-detect or decreasing trends in TPH and BTEX concentrations. Although TPH concentrations in most wells are lower and/or are declining, groundwater extraction has not been effective at mass removal in certain areas.

Update on 5-Year Action Plan (KMEP)

Ms. Chou next gave an update on KMEP's progress on their 5-Year Plan. She said that the second addendum was prepared in April 2006 and was approved by RWQCB in 2007. Then in the summer of 2007 they began work with a pilot test and then began their expansion. They added seven additional dual-phased extraction wells. They installed new pumps in extraction wells. Then the new pumps were brought online in 2008. They are still recovering free product. They switched over to bioventing late last year. There has been a drop off in free product in the older wells, but they still have 1 to 2 feet of free product in the newer wells. Ms. McIntosh commented that KMEP has had more recent releases (1994 and 2003), so that may be why their wells have more free product. DESC wells have older free product, plus DESC is no longer in operation at the site.

Ms. McIntosh said that she had asked for this 5-Year Action Plan update after reviewing the latest groundwater monitoring report, considering the down time of the remediation systems, and considering that we are already three years into the 5-year plans. She requested that both DESC and KMEP prepare a report that would give an overview of the timelines and take a look at where we are now compared to where we are supposed to be.

Mr. Hassan said that the one caveat is that they are still waiting on RWQCB to provide a letter to let them know whether or not they approved of the cleanup levels proposed in DESC's 5-Year Plan. Mr. Hu said that he would go back and review the letter. He said that the RWQCB's cleanup goals are to protect human health and groundwater. Sometimes it is not always practical, but that is the goal. Anything deviating from those goals needs documentation, such as a health risk assessment. Mr. Hassan said that a risk assessment has been performed for the proposed future uses of the site. In drafting the cleanup goals, Parsons followed the methods outline in the RWQCB web site. Kola Olowu said that in cases where the MCLs are not obtainable, they usually work out negotiated cleanup levels. He asked Mr. Hu if they could do that at this site. Mr. Hu said he would take a look at the risk assessment and discuss with his colleague, Elizabeth Erickson, who was RWQCB's project manager for this site prior to Mr. Hu. Mr. Hassan said that these issues were discussed with Ms. Erickson, but she was transferred to a different position before show could issue an approval letter and DESC still does not know what the target cleanup levels are.

Planned Activities for the Next Quarter

Mr. Hassan said that activities planned for this quarter include:

- Continue weekly system inspections, required sampling, evaluation, and optimization
- Arsenic exchange vessel rejuvenation and re-connection. Since pumping has increased, this has not been an issue.
- Site-wide weed abatement
- Conduct 1st quarter sentry GWM (completed January 11-13)
- Prepare and submit NPDES DMR for 4th quarter 2009
- Prepare and Submit Supplemental Investigation Addendum Work Plans for TFS, Water Tank, and NE Settling Pond Areas

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- Continue to work on the joint capture analysis and collect additional data as needed
- Conduct startup and optimization of upgraded SVES (once AQMD permit has been issued).

5. Groundwater Monitoring Report Redwan Hassan, Parsons

Mr. Hassan said that the Second Semiannual 2009 Groundwater Monitoring Event took place in October. A combined 96 wells were sampled, including 3 Exposition aquifer wells. Groundwater elevations decreased by approximately one foot since April 2009. Free product was detected in 11 wells and ranged in thickness from 0.01 to 1.16 (MW-15) feet. Next he showed maps with groundwater elevation and free product plumes in October 2009 compared to October 2008. The October 2009 map is consistent with the 2008 map.

VOCs were not detected in any samples collected from the Exposition aquifer wells. In most areas, the lateral extents of TPH, benzene, 1,2-DCA, and MTBE in groundwater remain similar to those interpreted during April 2009. In general, TPH concentrations have increased since the April 2009 semiannual event; still, some of the wells have exhibited decreases such as GMW-59, GMW-60, and GMW-61 located in the north-eastern area. Benzene was not detected in any of the off-site wells west of the site. With the exceptions of MTBE in GMW-6 (located in the north-central area), MW-SF-1 (south-central area), and GMW-O-18 and PZ-5 (southeastern area), the detected concentrations of MTBE were below the conservative risk-based cleanup goal for MTBE (40 µg/L). Detected concentrations of 1,2-DCA were below the conservative risk-based cleanup goal for 1,2-DCA (70 µg/L). 1,2-DCA and MTBE concentrations have remained consistently below the risk-based cleanup goals in the western area and off-site area west of the site and support the continued shutdown of the West Side Barrier pumping system.

Mr. Hassan next showed plume maps from 2006, 2007, 2008, and 2009. For TPH, the limits shown in the 2008 map are similar to 2007. The 2009 limits are somewhat consistent with 2008, with some decreases. Ms. Chou said that the TPH detection in October 2009 in well GMW-O-2, located off-site to the south, may be anomalous. This well is scheduled to be resampled when the system is restarted. The limits of benzene shown in the 2009 map are a lot less than in the 2008 map. The 2009 MTBE map did not show much change from the 2008 map. The 2009 1,2-DCA map is similar to the 2008 map.

Ms. McIntosh then asked some questions about the report. She asked if there was a reason that free product was found in well GMW-36. Ms. Chou said that was a total fluids extraction well, so it was not surprising to see free product in that well. Next Ms. McIntosh asked about the TPH increase in well MW-SF-9 near the intermediate block valve. Ms. Chou said that there were increases in several wells including this one. Water levels were low. The last time water levels were this low was about six years ago. This means there is less water column to dilute the concentrations. They are seeing this site-wide. Next Ms. McIntosh asked about the increase in benzene concentrations in wells PZ-5 near the 24-inch block valve. Ms. Chou said they are hoping this well will improve once the system goes back online. Mr. Emig asked if there are any extraction wells in this area. Mr. Defibaugh said there are two extraction wells and one monitoring well in this area. Next Ms. McIntosh asked about the increase in MTBE in well GMW-O-15. Ms. Chou said that this was a combination of decreased water levels and reduced pumping in the area. Then Ms. McIntosh asked about the increase in MTBE in well GMW-6 in the north central area. Ms. Lucas said that the increase could be due to seasonal changes or an anomaly and that the well will continue to be monitored.

6. Set Date and Agenda for Next Meeting

The next semiannual RAB meeting will be held on Thursday, July 29, 2010 at 6:30 p.m. in the Norwalk Arts & Sports Complex.

7. Public Comment Period

Discussion on Semiannual Meetings

Ms. McIntosh said that at the previous RAB meeting, Mr. Olowu requested a discussion about changing from quarterly to semiannual RAB meetings. Ms. McIntosh said that she would be concerned with

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communications since there is a lot going on right now. She said she would agree to it under the following conditions: If there are any issues, the RAB needs to know about it, and the RAB needs to get data in a timely manner. We can schedule the next meeting for July, and then revisit the issue at that time if needed. Ms. McIntosh also requested the following:

1. Clean copy of tonight's presentation by KMEP emailed to the RAB members and mailed to Gene Garcia.
2. 5-Year Action Plan progress report from both KMEP and DESC.
3. Updates on the selenium issue from KMEP.
4. System operational updates, including what wells are running, 60 days after system restart from KMEP.
5. Update on the status of SVES operations and AQMD permit, within the next one to 1.5 months from DESC.
6. Update on discussion with RWQCB on cleanup levels (around March 2010) from DESC.
7. KMEP update on tracer test and/or pig testing: when was the last time it occurred and when it is scheduled next, per Ms. Winkler's request.
8. Report on types of fuel transported by KMEP, per Ms. Winkler's request.
9. 24-Inch Block Valve/Holifield Park Update from KMEP.

Ms. McIntosh also announced that the RAB had received an e-mail from Bill Miller's son, David, stating that Mr. Miller will need to resign from the RAB due to health reasons. Ms. McIntosh will coordinate preparing a letter and plaque thanking Mr. Miller for his service on the RAB.

Mr. Hoskins made a motion to adjourn the meeting. The motion was seconded, and then the motion was voted on. Ms. McIntosh adjourned the meeting at 9:03 p.m.

ACTION ITEMS		
Item	Responsible Party	Due Date
▪ <i>SEE SECTION 7 ABOVE</i>		
Next RAB meeting	All	7/29/10