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Meeting Minutes

Meeting Subject: Norwalk Tank Farm Restoration Advisory Board (RAB) Quarterly Meeting	Meeting Date: <u>23 October 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> M. McIntosh (Co-Chair) T. Winkler	<u>Other Members</u> A. Figueroa (City of Norwalk) J. Holdren (City of Cerritos) J. Hu (RWQCB) Lt. Col. Ramer (DESC-AMW) (Co-Chair)
<u>Other Attendees</u> S. Chou (AMEC Geomatrix) R. Hassan (Parsons) M. Lucas (Parsons) S. Osborn (KMEP) A. Armendarez (Office of Asm. Mendoza) L. Hernandez (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) E. Garcia (RAB member)	
<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.	

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1. **Introduction** Lt. Col. Ramer (DESC-AMW) (Co-Chair)

Lt. Col. Ramer called the meeting to order at 6:37 p.m. Lt. Col. Ramer asked for comments on the draft minutes from the July 31, 2008, RAB meeting. Mary Jane McIntosh made a motion to accept the minutes as written. Steve Osborn seconded the motion. The minutes were approved without opposition.

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

Remediation Operations Update

Shioh-Whei Chou opened the meeting by giving a presentation overview on the topics to be covered for the Norwalk Tank Farm. The overview consisted of the remediation operations update, third quarter 2008 sentry groundwater monitoring event, and the additional off-site assessment results. Ms. Chou displayed a map of the remediation systems and indicated KMEP's cleanup areas: the Westside Barrier area, the South Central area, and the southeastern 24-inch block valve area. She also pointed out DESC's remediation system in the northern and truck rack areas.

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. There is no change from the previous quarter. During the third quarter of 2008, approximately 239 gallons equivalent of fuel were removed from soil and destroyed by catalytic oxidation. Approximately 453,000 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 63,100 hours since September 1995. It operated continuously during the third quarter of 2008 with the exception of being down a few days for an electrical disruption due to a faulty breaker at the main electrical panel (approximately seven days). The SVE blower motor was replaced and systems were restarted. The SVE system was also shut down for approximately two weeks during the sentry groundwater monitoring event and was shut down for about a day due to power interruption. The SVE system operated 76 percent of the time during the quarter (or 90 percent excluding the planned shutdown for groundwater monitoring). Ms. Chou showed two graphs of the cumulative fuel hydrocarbons removed by vapor extraction: the first was the vapor extraction to date, and the second graph showed a closer look at the past six months of fuel removed by SVE.

She said that KMEP's Groundwater/Product Extraction System consists of 18 total fluids (product and groundwater) extraction wells and 2 groundwater extraction wells in the South-Central Plume area, and 2 total fluids extraction wells in the Southeastern 24-Inch Block Valve area. The West Side Barrier system was shut down in August 2008.

Total groundwater extracted during the third quarter 2008 included: 1,370,000 gallons from the South-Central Plume area; 229,000 gallons from the Southeastern 24-Inch Block Valve area; and 11,000 gallons from the West Side Barrier area. Total groundwater extracted since September 1995 includes: 30.2 million gallons from the South-Central Plume area; 8.9 million gallons from the Southeastern 24-Inch Block Valve area; and 26.9 million gallons from the West Side Barrier area. To date a total of 66 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 third quarter of 2008 with the following exceptions:

- Electrical disruption due to a faulty breaker at main electrical panel (approximately 7 days); SVE blower motor was replaced and systems were restarted.
- Third quarter 2008 sentry groundwater monitoring event (approximately 14 days).
- Power interruption (approximately 1 day).
- High level alarm in air stripper sump; air stripper transfer pump was replaced (off for approximately 3 days) and groundwater/product extraction system was restarted.
- The West Side Barrier system was shut down in August 2008.

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The system operated for 72 percent of the time during the quarter. The system operated for 86 percent of the time excluding the planned shutdown period for groundwater monitoring. Ms. Chou showed a graph of the cumulative groundwater and product extracted and water treated. The graph showed an increase in volume of groundwater extracted from the south-central area during the past several months.

Planned Remedial Activities

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

- Continue SVE, TFE, and GWE in the South-Central and Southeastern areas.
- Continue to monitor concentrations of dissolved 1,2-DCA (1,2-dichloroethane) and MTBE (methyl tertiary-butyl ether) in western area.
- Continue routine system inspections.
- Continue data collection for monitoring and evaluation of remediation systems.
- Continue adjustments to remediation wells to optimize remediation.
- Collect data to evaluate bioremediation.

Third Quarter Sentry 2008 Groundwater Monitoring Event

Ms. Chou stated the third quarter 2008 sentry event was conducted during August 8 to 14, 2008. Seventeen wells were sampled, including four Exposition wells. Soil vapor and groundwater/product extraction systems were shut down prior to groundwater monitoring activities. In general, groundwater elevations decreased in both uppermost and Exposition aquifers beneath the site since April 2008. During this event, 36 wells were gauged and free product was detected in seven wells in the south-central and southeastern areas where it has been detected previously. No VOCs (volatile organic compounds), TPHg (total petroleum hydrocarbons as gasoline) or TPHfp (TPH as fuel product) were detected in Exposition aquifer monitoring wells or southern off-site wells GMW-O-1, GMW-O-2, and GMW-O-3. In the Western area, concentrations of 1,2-DCA and MTBE in WCW-3 and WCW-7 have remained below risk-based corrective action (RBCA) goals for both 1,2-DCA (70 ug/L) and MTBE (40 ug/L) since August 2005.

Ms. Chou showed contour maps for 1,2-DCA, MTBE, and benzene previously exhibited at the July 2008 meeting and new contour maps showing limited areas where these chemicals are detected at concentrations above their respective RBCA goals. The first 1,2-DCA map indicated areas where 1,2-DCA was not detected and areas where 1,2-DCA was detected at or above 0.5 µg/L. The second 1,2-DCA map showed no concentrations of 1,2-DCA were detected above 70 µg/L at the site, indicating that the 1,2-DCA RBCA goal has been achieved. The next map showed the distribution of detected MTBE in groundwater. Next a map was shown indicating areas where the MTBE RBCA goal of 40 µg/L has been achieved. The other chemical of concern is benzene and two maps were shown. One map showed the distribution of detected benzene in groundwater and free product while the second map showed areas where the benzene RBCA goal remains to be achieved.

Additional Off-Site Assessment Results

Ms. Chou stated the objectives for the Additional Off-Site Assessment at the Southeastern 24-Inch Block Valve Area were:

- 1a. Further assess the presence and distribution of benzene and other volatile fuel constituents in soil gas as identified during the 2006/2007 Holifield Park investigation at B-24SOUTH
- 1b. Evaluate potential surface emissions of volatile fuel constituents if indicated by results of soil gas survey
2. Verify presence and depth of Bellflower aquitard in the southwestern portion of Holifield Park
3. Delineate lateral extent of dissolved fuel constituents in groundwater east of boring B-122
4. Delineate vertical extent of dissolved fuel constituents in groundwater in the southwestern portion of Holifield Park.

Ms. Chou then presented the results for each of the objectives. There were three soil vapor sampling locations (SG-1, SG-2, and SG-3) that were completed in southwestern portion of Holifield Park on July 8, 2008. The soil gas samples were collected at depths of approximately 6 and 16 feet below ground surface at each

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location. The results indicated that VOCs were not detected at or above their respective residential California Human Health Screening Levels (CHHSLs) in soil gas samples. Soil gas results indicated no risk and did not indicate the need for further testing. She showed a map with the analytical results for the soil gas samples collected in July 2008. Based on the soil gas sampling results, Objectives 1a and 1b were addressed.

Ms. Chou presented the results for the Groundwater Assessment. The Cone Penetrometer Test (CPT) borings were advanced at two locations, CPT-1 and CPT-2, in the southwestern portion of Holifield Park on July 8, 2008. The top of the Bellflower aquitard was encountered at depths of approximately 48.5 feet (CPT-1) and 48 feet (CPT-2). She showed a map with the July 2008 CPT and Groundwater sampling locations. Based on the CPT results, Objective 2 was addressed.

Ms. Chou continued with the results of the Groundwater Assessment. Three discrete-depth groundwater samples were collected in the vicinity of CPT-1 at depths of approximately 29, 41, and 47 feet. CPT-1 is located approximately 70 feet east of Parsons' 2007 sample location B-122. Target analytes including TPH, BTEX (benzene, toluene, ethylbenzene, and total xylenes), MTBE, and other fuel oxygenates were not detected in the groundwater samples collected near CPT-1. The eastern extent of dissolved fuel constituents in groundwater in this area has been delineated, and Objective 3 was addressed.

Ms. Chou concluded the results of the Groundwater Assessment. Three discrete-depth groundwater samples were collected in the vicinity of CPT-2 at depths of approximately 29, 36, and 47 feet. CPT-2 is located approximately 105 feet northwest of B-122 and approximately 185 north-northwest (hydraulically downgradient) of the 24-inch block valve. TPHg, MTBE, and/or TBA (tert-butyl alcohol) were detected in the groundwater samples collected near CPT-2. The vertical distribution of fuel constituents was similar to those observed in previous investigations. Cumulative results of historical groundwater monitoring and groundwater assessments, in combination with the confirmed presence of the Bellflower aquitard, have adequately delineated the vertical distribution of dissolved fuel constituents in groundwater in the southwestern portion of Holifield Park, thus addressing Objective 4.

In conclusion, Ms. Chou stated the assessment objectives were achieved and have been adequately addressed. No further assessment of vadose zone or groundwater conditions is necessary near the off-site 24-inch block valve area. The results can be found in the "Additional Off-Site Assessment Report" that was submitted to the Los Angeles Regional Water Quality Control Board (RWQCB) on August 28, 2008. Tracy Winkler asked if she meant vertical distribution of chemicals was similar to those observed in previous investigations. Ms. Chou responded by stating that at the Southwest area of Holifield Park, the vertical distribution of chemicals is similar. The previous assessment in 2007 did not go below 42 feet; during this assessment, they collected samples at 47 feet.

Ms. McIntosh stated that for clarification that all the delineations are being addressed in the RAP addendum report. Mr. Osborn stated the CPT-2 concentrations are already being addressed and the remediation program has not changed.

3. **DESC-AMW Update** Redwan Hassan, Parsons

General Site Activities

Mr. Hassan opened his presentation with overviews of the activities conducted at the site by Parsons. The general site activities and weekly system inspections were conducted during the third quarter: July 1 through September 30. The system performance and compliance sampling were conducted on July 2 and 18, August 27, and September 3, 5, 8, and 15. The absorbent sock monitoring and change out was conducted on July 2. On August 15, the 2008 2nd Quarter NPDES Discharge and Monitoring Report was submitted, and the soil gas baseline monitoring and respiration testing began for the vapor extraction on September 18.

Remediation System Update

Mr. Hassan gave the Remediation System update. They installed the granular activated carbon (GAC) vapor recovery for the groundwater treatment system (GWTS) surge tank. Elevated TBA concentrations were detected from samples collected on July 2 resulting in system shut down and GAC change out. On July 7,

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August 13, and September 9, the MYCELX filters at the MX-7 unit were replaced, and on August 22 the GAC change out was conducted at both vessels.

Mr. Hassan then discussed the Remediation System operations summary. The total groundwater extracted and treated during the third quarter of 2008 was 627,030 gallons. The total groundwater extracted and treated since April 1996 has been 43.5 million gallons. He then discussed the GWTS operations summary from July 1 through 11 and August 25 through September 15. There was continuous operation from GW-2 and GW-13 in the northwest corner and GW-15 in the eastern area. The GAC vessels awaiting carbon change out were shut down for sentry monitoring on July 11, and on August 25 the system was restarted. Lastly the system was shut off for soil gas monitoring and respiration testing on September 15. Mr. Hassan next presented the absorbent sock progress; showing well locations and the initial product thickness (measured on July 23, 2007 or October 10, 2007) compared to the current product thickness (measured on July 24, 2008).

Mr. Hassan said the soil vapor extraction system was not in operation for this quarter due to contractual issues. From April 1996 through June 2008, approximately 428,719 gallons of total hydrocarbon mass were removed. Breakdowns were approximately 215,868 gallons recycled and destroyed and an estimated 212,850 gallons of hydrocarbons destroyed due to enhanced biodegradation. A detailed breakdown of the 215,868 gallons recycled and destroyed includes 55,568 gallons of free product recovered and recycled (including absorbent sock recovery); 1,400 gallons of dissolved-phase hydrocarbons recovered and treated through onsite granulated carbon treatment system; and 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 reached a plateau.

Mr. Hassan discussed the respiration monitoring and testing. Baseline soil gas monitoring was conducted from September 18 through 26 which consisted of collecting field measurements at each location (VMP-1 through VMP-28 where feasible) for pressure, oxygen, carbon dioxide, and total volatile hydrocarbons. Laboratory samples were also collected and analyzed for TO-15 at 14 locations. On September 29th, the respiration tests began at nine locations. The locations of the sampling and tests were listed on two power point presentation slides. Mr. Hassan next displayed a map of the sampling and testing locations throughout the site. Once respiration tests have been completed, respiration rates will be calculated and the field and laboratory data will be compared with historical results. The performance of remediation system will be evaluated and summary report generated. An updated strategy for soil remediation will then be proposed.

Holifield Park Investigation Status

Mr. Hassan said Parsons conducted supplemental investigations at the park from September 22 through October 10. He then displayed a map of the sampling locations and indicated 11 hydropunch groundwater sampling locations, 2 groundwater monitoring wells, and 3 soil vapor sampling locations. Two photographs were shown to indicate the GMW-64 Hollow Stem Auger Drilling and the B-124 Hydropunch Groundwater sampling.

Mr. Hassan gave the Hydropunch Groundwater Results from the investigations conducted at the Park. There were 11 sampling locations (B-123 through B-133). Samples were collected at approximately 44 to 48 feet and 54 to 58 feet below ground surface at each location. The results indicate the chemicals of potential concern were detected above cleanup goals in the north and northeast sampling locations (B-128 and B-133); therefore the objective of defining the plume extent has not been met in this area and additional investigation is required. The groundwater plume has been defined to the south and east both horizontally and vertically, and no additional investigation is needed in these areas. He then displayed two tables which listed the 24 locations and 5 chemicals of concern from the samples collected on September 24 and 25; the results reported in micrograms per liter.

Mr. Hassan discussed the two groundwater monitoring wells (GMW-63 & GMW-64) that were installed at the far east of Holifield Park along the fence bordering Dolland Elementary School. The groundwater from these two new wells was sampled during the Semiannual Monitoring Event (week of October 13). The results

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indicate that all parameters (TPHg, TPH as JP5, and BTEX) were not detected above the laboratory detection limits. He then discussed the Vapor Monitoring Probes where three soil vapor sampling locations (VMP-29 through VMP-31) were completed in Holifield Park along the fence bordering Dolland Elementary School. The soil gas samples were collected at 5 feet and 15 feet below ground surface at each location (October 10). The results indicate that none of the detected chemicals of potential concern concentrations exceeded approved corresponding screening levels. Therefore, adverse health effects associated with subsurface volatilization and subsequent inhalation of chemicals of potential concern are not expected for park users or school children/staff.

Parsons' proposed additional investigations at Holifield Park to include six step-out hydropunch groundwater sampling locations to define the north/northeastern plume extent. Groundwater samples will be collected from the following depths: 24-28 feet, 31-35 feet, 36-40 feet, 44-48 feet, and 55-58 feet below ground surface at each proposed location and samples to be analyzed for: TPH as JP5, TPHg, and VOCs. He displayed a map of Holifield Park showing the new proposed locations.

Sentry Groundwater Monitoring

Mr. Hassan discussed the Sentry Groundwater Monitoring. Seventy wells were gauged, and eight wells were sampled (plus one duplicate). Groundwater elevations have generally decreased in both the uppermost and Exposition aquifers since April 2008. He displayed a table of the monitoring results collected on July 29, 2008, which are consistent with the previous year.

Planned Activities

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. This will be done next week. They will complete the vapor respiration test, evaluation and summary report. They will conduct step-out groundwater sampling at Holifield Park that will include semiannual groundwater monitoring which was completed on October 13, 2008. Mr. Hassan said the purpose of putting in wells on-site will avoid putting more wells in the Park. They began weed abatement and tree trimming on October 20, 2008. Parsons will prepare the 2nd Semiannual Groundwater Monitoring Report to be presented in January 2009.

4. Set Date and Agenda for Next Meeting

The next quarterly RAB meeting will be held on **Thursday, January 22, 2009 at 6:30 p.m.** in the Norwalk Arts & Sports Complex. Mr. Joe Holdren from the City of Cerritos made an announcement that this was his last meeting. He will be retiring and does not know who his replacement will be at this time.

5. Public Comment Period

Ms. McIntosh had one item to discuss. At the last meeting, some wells had not been sampled for quite sometime. She received information from Parsons that reasons for some of the wells not being scheduled were that most of the wells were either destroyed or were temporary groundwater sampling wells. Ms. McIntosh let everyone know the sale of the property is still pending and there is no new date.

Lt. Col Ramer adjourned the meeting at 7:19 p.m.

ACTION ITEMS

Item	Responsible Party	Due Date
Next Quarterly RAB meeting	All	01/22/09