

# FINAL

## Meeting Minutes

<b>Meeting Subject:</b> Norwalk Tank Farm Restoration Advisory Board (RAB) Quarterly Meeting	<b>Meeting Date:</b> <u>22 January 2009</u> <b>Meeting Time:</b> 6:30 p.m. <b>Meeting Place:</b> Norwalk Arts & Sports Complex
<b>RAB, PROJECT TEAM, AND OTHER ATTENDEES</b>	
<b><u>RAB Community Members</u></b> M. McIntosh (Co-Chair) T. Winkler	<b><u>Other Members</u></b> A. Figueroa (City of Norwalk) J. Hu (RWQCB) S. Osborn (KMEP) (Co-Chair)
<b><u>Other Attendees</u></b> S. Chou (AMEC Geomatrix) R. Hassan (Parsons) M. Lucas (Parsons) A. Romero (Office of Rep. Napolitano) R. Beauregard (Weston Solutions) L. Hernandez (URS)	<b><u>Acronyms:</u></b> 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
<b><u>Absentees</u></b> E. Garcia B. Hoskins N. Matsumoto (WRD) W. Miller M. Pitta (KMEP)  Lt. Col. Ramer (DESC-AMW) (Co-Chair) Attendee from the City of Cerritos	
<b><u>Not Attending</u></b> Dr. Duran (OCCS) Dr. Landolph (OCCS)	
<b><u>BACKGROUND</u></b> 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 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** Mary Jane McIntosh, Community Co-Chair, Meeting Chair

Mary Jane McIntosh called the meeting to order at 6:40 p.m. Ms. McIntosh asked for comments on the draft minutes from the October 23, 2008, RAB meeting. Steve Osborn made a motion to accept the minutes as written, and Ane Romero of Congresswoman Napolitano's office 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 with an overview of the topics to be discussed regarding the Norwalk Tank Farm. The topics consisted of the remediation operations update, additional assessment update, and the conceptual site model development update. She displayed a map of the remediation systems and pointed out the cleanup wells and piping in four areas: the Westside Barrier system, the South Central plume remediation system, the Southeastern 24-inch Block Valve area, and 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. She gave a summary of the operations during the fourth quarter of 2008 and stated that approximately 160 gallons equivalent of fuel were removed from soil and destroyed by catalytic oxidation. This was less than the third quarter of 2008. 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 64,200 hours since September 1995. It operated continuously during the fourth quarter of 2008 with the exception of being down a few weeks for the second semiannual 2008 groundwater monitoring event (approximately 14 days) and during the SVE rebound testing starting on November 26, 2008. The SVE system operated 44 percent of the time during this quarter (or 100 percent excluding the planned shutdown for groundwater monitoring and rebound testing).

Ms. Chou explained the SVE Rebound Testing in more detail and said the SVE system was shut down on November 26, 2008, based on low volatile organic compound (VOC) concentrations in vapor samples from the system influent and several SVE wells. During the rebound test, concentrations of VOCs, oxygen, and carbon dioxide were monitored in the SVE wells. During the SVE system down time, increases in VOC concentrations were observed. The SVE system was restarted on January 20, 2009, based on VOC concentration rebounds observed in several SVE wells. Additional SVE rebound tests will be performed when VOC concentrations decrease and remain low.

Ms. Chou provided two graphs showing the SVE system operations summary of cumulative fuel removed by vapor extraction. The first graph indicates over 450,000 gallons of fuel were removed during September 1995 through December 2008. The second graph shows the cumulative fuel removed by vapor extraction during the past six months.

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 operations for the West Side Barrier system were discontinued in August 2008 due to the low concentration of chemicals of concern.

Total groundwater extracted during the fourth quarter 2008 included: 1,720,000 gallons from the South-Central Plume area; 64,000 gallons from the Southeastern 24-Inch Block Valve area; and nothing extracted from the West Side Barrier area. In addition, 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. A total of 67.8 million gallons of groundwater has been extracted from all three areas, and 8,917 gallons of free product have been removed.

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Ms. Chou said that the Groundwater/Product Extraction System operated continuously during the fourth quarter of 2008 with the following exceptions:

- Second semiannual 2008 groundwater monitoring event (approximately 14 days).
- Liquid-phase granular activated carbon change out (approximately 3 days).
- Power interruption (approximately 6 days).
- Treatment system maintenance [including replacing fittings and pump maintenance (approximately 10 days)].

The system operated for 61 percent of the time during the quarter. The system operated for 75 percent of the time excluding the planned shutdown period for groundwater monitoring. Ms. Chou showed a graph of the cumulative product extracted and water treated for the three areas mentioned above. The graph showed a steady increase in volume of groundwater extracted from the South-Central area since implementation of system upgrades described in the Second Addendum to the Remedial Action Plan.

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

- Continue total fluids extraction and groundwater extraction 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 the western area.
- Continue routine system inspections.
- Continue data collection for monitoring and evaluation of remediation systems.
- Continue adjustments to remediation wells to optimize remediation.
- Continue SVE rebound tests as appropriate.

### **Additional Assessment Update**

Ms. Chou stated that in a letter dated November 26, 2008, the Regional Water Quality Control Board (RWQCB) responded and commented on the report titled "Additional Off-Site Assessment Report, Off-Site 24-Inch Block Valve Area," dated August 28, 2008. The report described additional off-site assessment activities conducted in July 2008. She said RWQCB questioned the presence or continuity of an aquitard (groundwater sample) in the vicinity of the block valve and requested a work plan for further vertical delineation of contaminants in that area. She said the work plan will be submitted to the RWQCB on Monday, January 26, 2009.

### **Conceptual Site Model Development**

Ms. Chou next discussed the development of a Conceptual Site Model (CSM) per a letter from the RWQCB dated November 26, 2008. The RWQCB requested that KMED work together with DESC to develop this model. The development of the CSM is underway and includes the following tasks:

- Scoping and Database Review and Update
- Development of Conceptual Lithologic Model
- Development of Contaminant Distribution Models
- Preparation of CSM report

Tracy Winkler asked how long it would take to complete this report. Ms. Chou responded that an update would be provided at the next RAB meeting. In addition, they plan to submit the report to RWQCB by February 13, 2009. Ms. McIntosh inquired about the development of the CSM and an example of how contaminants travel. Ms. Chou responded that the CSM report would describe the current distribution of contaminants in various media at the site.

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

#### General Site Activities

Mr. Hassan opened his part of the presentation with the general site activities and weekly system inspections conducted during the fourth quarter 2008. System performance and compliance sampling were conducted on November 25, December 5, 8, and 12, 2008. The absorbent sock monitoring and change out continued. The NPDES (National Pollutant Discharge Elimination System) Discharge and Monitoring Report (DMR) for the third quarter of 2008 was submitted on November 13, 2008. Parsons is preparing to submit the fourth quarter 2008 report. The aquifer pump test was conducted during the fourth week of October and the first week of November. Weed abatement and tree trimming began the third week of October. Ms. McIntosh commented that the purpose of the trees was to cover the tanks and camouflage the area. She further stated the tree trimming removed a lot of the trees and now the tanks are visible. Mr. Hassan made a note of the comment and stated the trees grew so big they were pushing the fence out. He will see to it that they let the trees grow out. Mr. Hassan continued and stated the second semiannual Groundwater monitoring was performed the first week of October. Lastly, the Second Semiannual Groundwater Monitoring Report was submitted late last week to the RAB members.

#### Remediation System Update

Mr. Hassan presented the Remediation System update. The soil vapor assessment was completed the first week of October 2008. The SVE system remained out of operation for this quarter, and Mr. Hassan said that they are looking at hot spots and some other areas for continued SVE. During groundwater remediation, TBA (tert-butyl alcohol) exceeded discharge levels, and therefore the groundwater treatment system (GWTS) was shut down and the granular activated carbon (GAC) was replaced. TBA levels reached the earliest breakthrough on GAC and are monitored by frequent process sampling/inspections and timely GAC replacement. The last of four weekly compliance samples, per permit requirements, were collected on December 5, 2008. The GWTS GAC change-outs on the two vessels were completed on December 24, 2008.

Mr. Hassan discussed the GWTS operations summary and stated the amount of groundwater extracted and treated was 41,360 gallons for the fourth quarter of 2008 and 43.5 million gallons since April 1996. During the following periods the system was off and the reasons are as follows:

- September 15 – October 8: Soil gas monitoring and respiration testing as discussed at the last RAB meeting
- October 8 – October 15: Quarterly groundwater monitoring
- October 15 – November 5: Aquifer pump test preparation, allow groundwater to return to static levels
- November 5 – November 12: Aquifer pump test preparation, completed November 14<sup>th</sup>
- November 15 – November 24: Electrical wiring and transformer malfunction; some transformers were malfunctioning and were hazardous. SCE and consultants inspected the gates and transformers and found that both are working
- December 23 – December 24: GAC change-out.

Time that the GWTS was on are as follows:

- October 8: operated for approximately four hours to check equipment
- November 13 – November 14: Aquifer pump test (two days)
- November 25 – December 31: System restarted with continuous operation.

Mr. Hassan gave an update of the remediation system performance. The system has been operating since April of 1996 through December 2008. During this time, approximately 428,722 gallons of total hydrocarbon mass were removed. Breakdown was approximately 215,870 gallons recycled and destroyed and an estimated 212,851 gallons of hydrocarbons destroyed due to enhanced biodegradation.

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### Soil Vapor Assessment

Mr. Hassan said that the Soil Vapor Assessment objectives are as follows:

- Assess the vadose zone soil chemistry at its current state, collect vapor samples and compare to initial site conditions;
- Estimate the performance of the SVE system; and
- Determine if further vadose zone remediation is warranted.

He then displayed a map which listed the 28 testing locations, sample collection dates, and VOCs sampled. The average total reduction percentage was given resulting in receiving a good removal rate. Mr. Hassan concluded that the results clearly show a substantial decrease in VOC concentrations across the site. This suggests that the SVE system has helped reduce the quantities of on-site VOCs in the vadose zone. Since there have been no impacted soils in Holifield Park, there will be no SVE in Holifield Park. However, SVE will be re-initiated in target areas within the site boundaries, specifically the Eastern boundary, where soil vapor concentrations are still elevated.

### Pumping Test & Groundwater Capture Zone Analysis

The pumping tests and capture zone analysis were conducted at extraction well GW-15 (located in the eastern portion of the site, bordering Holifield Park) and surrounding wells. The remediation system was shut down during the testing. The pump wells are located inside the facility. A groundwater capture analysis was performed in the eastern portion of the site for the impacted groundwater extending from the site, to the east, under Holifield Park. The pumping tests and objectives were:

- Step-drawdown test – to determine the optimal pumping rate of the constant rate test and to estimate well loss.
- Constant rate test – to determine hydraulic parameters (transmissivity, hydraulic conductivity, and storage coefficient). This allows the wells to recover.
- Recovery test – to support the calculations of the constant rate test and to provide redundancy.

Mr. Hassan provided the pumping tests results and stated that at an average pumping rate of 6.5 gallons per minute (gpm), the drawdown in the pumping well GW-15 was approximately 6.9 feet and the approximate surrounding formation drawdown was 3.1 feet. This allows for determination of how far water has been depressed. After pumping for approximately 48 hours, a fairly uniform cone of depression developed. The associated drawdown at 70 to 100 feet away was approximately 0.70 feet. Minor drawdown of 0.25 feet or less was observed up to 180 feet from well GW-15. Depression means there is a drop in the water table. The results indicate the unit tested was fairly transmissive and had good hydraulic connection laterally throughout the well network.

Mr. Hassan provided the constant rate test results which are as follows:

- Transmissivity – ranged from approximately 488 ft<sup>2</sup>/day to 893 ft<sup>2</sup>/day
- Hydraulic conductivity – ranged from approximately 11 to 25 ft/day (estimated saturated thickness of 36 feet), where water was contained
- Storage coefficient – ranged from 0.0004 to 0.01.

Mr. Hassan explained what this means for groundwater remediation. He said that the groundwater capture analysis was conducted using site information, results from pumping tests, and an analytical modeling application (WINFLOW) and included the following tasks:

- Defining the target capture area
- Identifying hydraulic heads and gradients
- Developing an analytical groundwater model
- Modifying the model to develop a groundwater extractions system that would capture the target area.

The groundwater capture analysis was performed in order to capture the targeted area. Two pumping wells were simulated: well GW-15 and a second extraction well (designated as GW-16) located approximately 100

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feet north of GW-15. The simulated flow rates were 5 gpm at GW-15 and 3 gpm at GW 16.

Mr. Hassan provided a figure of the estimated groundwater capture for the eastern area and Holifield Park. The figure showed the localized groundwater mounding area west of the park, the groundwater flow path that takes in the Site and the park, the groundwater elevation contour, and the target capture zone. Ms. Winkler inquired about the increase in noise level due to equipment operation, and Mr. Hassan responded by stating it would not lead to additional noise. Ms. McIntosh wanted to know if they needed to add a well across the fence into the park, and Mr. Hassan said no, that another 6-inch diameter pumping well would be installed in site boundaries.

### **Holifield Park Investigation**

Mr. Hassan said Parsons began supplemental investigations at the park on January 7, 2009. They collected additional samples at six different locations. These six step-out hydropunch groundwater sampling locations were selected to define the north/northeastern plume extent. Groundwater samples are to be collected from approximately 4 to 5 foot intervals spanning from 32 to 55 feet below ground surface at each location. The samples were analyzed for TPH (total petroleum hydrocarbons) as gasoline, TPH as JP5, and VOCs. A map displayed the locations of major focus and the concentrations for non-detect below 500 micrograms per liter. The highly impacted areas are near the fence. The map also included:

- 11 hydropunch groundwater samplings locations
- 58 samples for Phase 1 and Phase 2
- 20 boring locations
- 2 groundwater monitoring wells
- 3 permanent vapor monitoring probe
- 6 proposed stepout groundwater sampling locations.

### **Conceptual Site Model Development**

Mr. Hassan said that the following activities were performed since the receipt of the RWQCB directive to develop a CSM for the site in the letter dated November 23, 2008. They are as follows:

- Reviewed and quality control checked the well information and analytical databases to identify data gaps and inconsistencies;
- Reviewed previous reports to accumulate hydrogeologic cross-sections, geologic boring logs, electronic data tables of lithologic information, and CSMs;
- Began preliminary CSM preparation with EVS software using subset of lithologic data; and
- Coordinated with AMEC Geomatrix on strategy and schedule to complete a joint CSM.

### **Planned Activities for the Next Quarter**

Mr. Hassan said that Parsons will continue the weekly system inspections, sampling, evaluation, and optimization of the remediation system. They conducted step-out groundwater sampling at Holifield Park during the first week of January and will conduct an evaluation of the results. They will finalize the groundwater capture analysis and prepare recommendations for expansion of the extraction system in the eastern site area. This effort will require additional well(s) that will be installed within site boundaries. They will conduct the first quarter sentry groundwater monitoring event. Some of the wells sampled in the fourth quarter of 2008 will need to be re-sampled.

#### **4. Second Semiannual Groundwater Monitoring Event** Redwan Hassan, Parsons

The second semiannual 2008 groundwater monitoring event took place in which 102 wells were sampled, including the four Exposition wells. The groundwater elevations decreased by approximately 1.0 – 1.05 feet since April 2008. No VOCs were detected in the Exposition wells. Free product was detected in 12 wells and ranged in thickness from 0.01 to 2.95 (MW-SF-13) feet.

Mr. Hassan presented two maps showing groundwater elevation. The first illustrated the groundwater elevation and free product plumes for the second semiannual 2008 event in October 2008. There were no

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changes from the previous years. The second map showed the groundwater elevation and free product plumes from the second semiannual 2007 event dated November 2007.

Mr. Hassan presented a summary of the water quality from the second semiannual groundwater monitoring event. In most areas, the lateral extent and concentrations of the dissolved TPH, benzene, 1,2-DCA, and MTBE plumes were similar to those detected during April 2008. In general, TPH concentrations in the southern and eastern areas have decreased since the April 2008 semiannual event. Detected concentrations of 1,2-DCA were below the conservative risk-based clean up goal (70 µg/L).

Mr. Hassan presented three illustrations for each of the following four analytes:

- TPH in the Uppermost Groundwater Zone for November 2006, November 2007, and October/November 2008. Distribution in 2008 was close to 2007.
- Benzene in the Uppermost Groundwater Zone for the periods November 2006, November 2007, and October/November 2008. Distribution in 2008 was the same as 2007.
- MTBE in the Uppermost Groundwater Zone for November 2006, November 2007, and October/November 2008. Distribution was the same for all three years. There was a little break up in 2008.
- 1,2-DCA in the Uppermost Groundwater Zone for November 2006, November 2007, and October/November 2008. Distribution was the same in 2007 as compared to 2006. Distribution in 2008 was consistent to 2007.

Ms. Winkler inquired about slide four and asked about the chemical (TBA), she did not know what this chemicals was, and if this was something new. Mr. Hassan stated the slide relates to the groundwater flow and this is not something new and it was screened at 20 feet. Ms. McIntosh then made a series of general comments and questions regarding the groundwater and stated that the presentation addressed all her questions on the Eastern boundary of the property. She wanted Parsons to be as aggressive as possible close to the park. She inquired about the truck rack area which is less than 75 feet from the southern boundary, close to the homes which are surrounded by the KMEP contamination. She wanted something done about the truck rack area, and once again to aggressively address the truck rack area near the houses. She further stated this is the second year into the 5-year plan and would like it to be accelerated as the plumes are similar in size as it was six months ago. There should be more of a decrease or movement as much of the work has been done.

### 5. Set Date and Agenda for Next Meeting

The next quarterly RAB meeting will be held on **Thursday, April 30, 2009 at 6:30 p.m.** in the Norwalk Arts & Sports Complex. The agenda should include a Conceptual Site Model update and an update on additional assessment.

### 6. Public Comment Period

Ms. McIntosh let everyone know the property transfer was called off as the Air Force dropped their plans until there are better economic times. Ms. McIntosh adjourned the meeting at 7:40 p.m.

## ACTION ITEMS

Item	Responsible Party	Due Date
Next Quarterly RAB meeting	All	04/30/09