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Meeting Minutes

Meeting Subject: Norwalk Tank Farm Restoration Advisory Board (RAB) Quarterly Meeting	Meeting Date: <u>30 April 2009</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 T. Winkler	<u>Other Members</u> C. Emig (City of Cerritos) A. Figueroa (City of Norwalk) J. Hu (RWQCB) S. Osborn (KMEP) (Co-Chair) Lt. Col. Ramer (DESC-AMW) (Co-Chair)
<u>Other Attendees</u> S. Chou (AMEC Geomatrix) S. Defibaugh (KMEP) M. Hanak (KMEP) R. Hassan (Parsons) M. Lucas (Parsons) K. Olowu (DESC) A. Padilla (AMEC Geomatrix) 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> E. Garcia N. Matsumoto (WRD) M. McIntosh (Co-Chair) W. Miller M. Pitta (KMEP)	
<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 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** Steve Osborn, KMEP Co-Chair, Meeting Chair

Steve Osborn called the meeting to order at 6:37 p.m. Mr. Osborn announced that Mary Jane McIntosh was out sick tonight. Charles Emig from the City of Cerritos announced he is taking Joe Holdren's place on the RAB. Mr. Osborn introduced Mike Hanak, KMEP Director of Environmental Remediation, and Steve Defibaugh, KMEP Remedial Project Manager, who were both in attendance. Shioh-Whei Chou introduced Alex Padilla of AMEC Geomatrix who was in attendance.

Mr. Osborn asked for comments on the draft minutes from the January 22, 2009, RAB meeting. Bob Hoskins made a motion to accept the minutes as written, and Lt Col Ramer 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 displayed a map of the remediation systems and pointed out the cleanup wells and piping in four areas: the Westside Barrier area, the South Central area, 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 said that during the first quarter of 2009, approximately 680 gallons equivalent of fuel were removed from the soil and destroyed by catalytic oxidation. This was more than four times more than the amount removed in the fourth quarter of 2008. Approximately 453,900 gallons equivalent of fuel have been removed from the soil and destroyed since September 1995. The SVE system has operated for approximately 65,500 hours since September 1995.

The SVE system operated continuously during the first quarter of 2009 with the following exceptions:

- SVE rebound testing starting on November 26, 2008 continued through January 20, 2009.
- SVE system was shut down for approximately eight days for replacement of the blower motor.
- SVE system was shut down for approximately five days due to malfunctioning water level sensors. Water level sensors were replaced.
- SVE system was shut down for approximately three days due to electrical disruptions. Breakers were reset in the electrical room and a fuse was replaced within the SVE electrical box.
- SVE system shut down due to unknown reasons for approximately four days.

The SVE system operated 60 percent of the time during this quarter (or 75 percent excluding the planned shutdown period for rebound testing).

Regarding the SVE rebound testing, Ms. Chou said that the SVE system was restarted on January 20, 2009, based on VOC (volatile organic compounds) concentrations rebounding in several SVE wells. An increase in influent vapor VOC concentrations was observed following the rebound test and resulted in increased mass removal relative to recent previous quarters. After concentrations leveled off, the SVE system was shut down on April 17, 2009, for another round of SVE rebound testing. VOC concentrations will be monitored and the SVE system will be restarted after VOC concentrations rebound. 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 from September 1995 through January 2009. The second graph shows the cumulative fuel removed by vapor extraction during the past six months. This graph shows that the recovery rate increased after the rebound test period.

Ms. Chou next discussed KMEP's Groundwater/Product Extraction System which consists of 18 total fluids (product and groundwater) extraction wells and 2 groundwater extraction wells in the South-Central Plume

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area, and 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 based on low concentrations of the chemicals of concern.

Total groundwater extracted during the first quarter of 2009 included 2,482,000 gallons from the South-Central Plume area and 216,000 gallons from the Southeastern 24-Inch Block Valve area. In addition, total groundwater extracted since September 1995 includes: 34.5 million gallons from the South-Central Plume area; 9.1 million gallons from the Southeastern 24-Inch Block Valve area; and 26.9 million gallons from the West Side Barrier area. A total of 70.5 million gallons of groundwater has 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 first quarter of 2009 with the following exceptions:

- The system was shut down during February 2009 to evaluate selenium concentrations in individual extraction wells (approximately 34 days).
- High water level alarm in transfer tank (approximately four days).

The system operated for 59 percent of the time during the quarter. The system operated for approximately 85 percent of the time excluding the planned shutdown period for the selenium evaluation. Ms. Chou then showed a graph of the cumulative product extracted and water treated for the three areas mentioned above.

Ms. Chou said that KMEP'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 western area. They will restart the Westside Barrier system if needed.
- 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 testing as appropriate. Another round of SVE rebound testing is currently in progress. When the concentrations increase, they will turn the system back on. When concentrations decrease, they will turn the system off.

First Quarter 2009 Sentry Results

Ms. Chou stated that during first quarter 2009, the Regional Water Quality Control Board (RWQCB) approved low-flow purging and sampling methods and requested analysis of fuel oxygenates using EPA Method 8260B be added to the monitoring program for future groundwater samples. They sampled 15 wells, including 4 Exposition wells. Groundwater elevations have generally decreased in the uppermost aquifer and increased in the Exposition Aquifer beneath the site since October 2008. No VOCs, total petroleum hydrocarbons as gasoline (TPHg), or TPH as free product (TPHfp) were detected in Exposition wells. In the southern off-site area, VOCs, TPHg, and TPHfp were not detected in wells GMW-O-1, GMW-O-2, GMW-O-3. In the Southeastern Block Valve area, free product was detected in GMW-36 and GMW-O-15 where it has been detected in recent previous events. This was likely due to a decrease in groundwater levels.

Ms. Chou said that wells MW-SF-1 and MW-SF-4 near the Intermediate 24-inch Block Valve area were monitored voluntarily by KMEP during the Sentry Event. No free product was detected in this area. In the western off-site area, 1,2-DCA and MTBE were detected in only one well (WCW-7) at concentrations below RBCA levels. Per the RWQCB's request, TBA (tert-butyl alcohol) was added to the analyte list for all groundwater samples collected during this event. TBA, a breakdown product of MTBE, was detected in the southeastern area in wells GMW-39 and PZ-5, where MTBE has been detected.

Additional Assessment Update

Ms. Chou stated that in a letter dated November 26, 2008, the RWQCB responded and commented on the

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report titled "Additional Off-Site Assessment Report, Off-Site 24-Inch Block Valve Area," dated August 28, 2008. RWQCB questioned the presence or continuity of an aquitard 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 was submitted to the RWQCB on January 26, 2009. The workplan is being reviewed, and approval is pending.

Preliminary Conceptual Site Model Update

Ms. Chou said that in a letter dated November 26, 2008, the RWQCB requested that KMEP work jointly with DESC to develop a conceptual site model (CSM). A preliminary CSM was developed and included the following tasks:

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

The Preliminary CSM report was submitted to the RWQCB on February 13, 2009.

Mr. Hoskins then asked a question, quoting Ms. McIntosh in last meeting's minutes, stating that this is the second year of the five-year cleanup plan. Should we be pursuing the cleanup more aggressively? Ms. Chou said that they have added more extraction wells and they are extracting more groundwater. They are also exposing more soil for soil vapor extraction. Rebound testing is also being performed to optimize system operation. Mr. Osborn added that by the next RAB meeting, they will have the second rebound test results, so they will be able to see if this is a viable way to pull out mass.

Mr. Emig asked about the depth of the plumes and Exposition Aquifer and the cleanup timeline. Mr. Osborn said that there is an aquitard in between the contamination and the Exposition Aquifer. He also said that studies started in the late 1980s and cleanup started in the mid 1990s. The goal is to get to closure.

Tracy Winkler asked about the RWQCB's question about the aquitard. Jeffrey Hu said that the data are not conclusive that it is an impermeable layer. Mr. Osborn added that the wells in the Exposition Aquifer have never been impacted. Ms. Winkler also asked about pipeline testing with the pig system. Lt Col Ramer said that the military and KMEP lines were tested eight months ago. The tests are required every five years, and pressure testing is required once per year. All the pipelines passed the test.

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

Remediation System Update

Redwan Hassan said that DESC has been conducting routine maintenance and operations including:

- Weekly system inspections that took place from January 1 through March 31.
- System performance and compliance sampling was conducted on January 9, 14; February 3, 25; and on March 5, 18, 26, 31.
- The Groundwater Treatment System (GWTS) Granular Activated Carbon (GAC) change out for both vessels was completed on February 16 and March 24.
- The National Pollutant Discharge Elimination System (NPDES) Discharge Monitoring Report (DMR) for the fourth quarter of 2008 was submitted February 11th.
- The First Quarter 2009 Sentry Groundwater Monitoring was conducted the third week of February.
- The Draft Conceptual Site Model (CSM) was submitted to RWQCB on February 13th.
- The Supplemental Investigation Report for Holifield Park and Dolland Elementary School was submitted to RWQCB on March 26th.

Mr. Hassan discussed the remediation system update and stated that 813,980 gallons of groundwater were extracted and treated in the first quarter of 2009 and 44.4 million gallons were extracted and treated since the system startup in April 1996. DESC's SVE system remained out of operation due to respirometry tests. DESC feels that concentrations have decreased considerably. Therefore, they need to convert the system from thermal oxidation to a carbon system. They hope to have this accomplished by the next RAB meeting. Mr.

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Hassan then gave a breakdown of the 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, including approximately 215,870 gallons recycled and destroyed through groundwater extraction and vapor extraction, and an estimated 212,851 gallons of hydrocarbons destroyed due to enhanced biodegradation.

Mr. Hassan said that the system was off over the following periods in the first quarter of 2009 due to routine change-outs and maintenance:

- December 31 through January 7: awaiting shipment of MYCLEX filters & change-out
- January 26: system off briefly to change MYCLEX filters
- February 6 through February 12: Quarterly Groundwater Monitoring
- February 13 through February 24: cleaned out surge tank and repaired leak, GAC change-out
- March 3 through March 4: repair leak at meter
- March 24 through March 26: GAC change-out

Mr. Hassan said that the system was on over the following periods:

- January 8 through January 26: system restart, continuous operation
- January 27 through February 6: system restart, continuous operation
- February 24 through March 3: system restart, continuous operation
- March 4 through March 24: system restart, continuous operation
- March 26 through March 31: system restart, continuous operation

Mr. Osborn asked what MCLEX was. Mr. Hassan said that it is a filter that is used for both hydrocarbons and particulates.

Holifield Park Investigation

Mr. Hassan said that Parsons conducted a supplemental investigation at the park on January 7 and 12, 2009. The tasks included:

- Installation of six soil vapor probes and two groundwater monitoring wells
- Collection of seven soil gas samples
- Collection of five soil samples
- Collection of 50 Hydropunch™ groundwater samples

The samples were analyzed for TPHg, TPH as JP5, and VOCs. Mr. Hassan next showed a map of the sampling locations and pointed out the borings and Hydropunch™ locations in the northern area and the vapor monitoring points to the east near the school boundary. These samples were taken to determine the plume extent.

The results showed that soil gas and soil have not been impacted with site-related VOCs above action levels. There were no high concentrations detected. The dissolved groundwater plume has been fully defined; therefore there is no need for additional investigation. The lateral extent of impacted groundwater above action levels is limited to approximately 300 feet east of DESC property beneath the park and does not extend beneath Dolland Elementary School property. This has been confirmed by sampling by both KMEP and DESC.

Mr. Hoskins asked if there was a trail of migration. Mr. Hassan said that highly impacted groundwater was identified in the wells in the eastern part of the Tank Farm. The investigation started in 2006 and remediation has been on-going within the facility boundaries. At this time, the dissolved hydrocarbon plume under the park will be remediated and pulled back to the site and treated on-site. He said that groundwater flow under the park is northwest towards the site, so migration is limited. Mr. Osborn added that groundwater flow is generally to the northwest, but in the Exposition Aquifer, groundwater flow generally goes in the opposite direction, to the southeast.

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Mr. Hassan next displayed a map showing benzene concentrations in groundwater. The impacts reach 300 feet from the facility border, but the highest concentrations are just outside the facility fence line. The two wells near the school fence line were non-detect.

Mr. Emig asked about monitoring. Mr. Hassan said that the wells on the eastern boundary are sampled quarterly. Ms. Winkler asked if the contamination could have come from KMEP pipelines. Mr. Hassan said that the KMEP pipelines were tested and were fine. This contamination could have come from old non-KMEP pipelines that are now empty. They are not sure how long the contamination has been there. The longer it is in the ground, the more it degrades.

Mr. Hassan next displayed a map showing TPH as gasoline concentrations in groundwater. He said these were the lighter hydrocarbons. He said that well GMW-63, located near the school, has been sampled quarterly and has been non-detect every time. He also pointed to a location for a new monitoring well to be installed, approximately between borings B-112 and B-108.

Mr. Hassan next displayed a map showing TPH as JP-5 concentrations in groundwater. This shows the heavier, kerosene-type hydrocarbons. He pointed out the location for a new extraction well to be located inside the facility near the eastern border. This well will enable them to pull back the impacted groundwater and route to the treatment system. Based on the capture zone analysis, Parsons is confident this system will be effective, but if there are any changes, additional assessment and remedial action will be taken. Mr. Emig asked if the fuel contamination is moving east. Mr. Hassan said that this map only shows part of the site. The contamination is dissolved, not free product on top of groundwater. The map shows isoconcentration contours. If it showed groundwater, it would show that it flows in the opposite direction. Ms. Winkler asked if the wells in the park were only for monitoring and not treatment. Mr. Hassan said yes. The contamination will be pulled back on site and treated.

In conclusion, Mr. Hassan said that groundwater impacted above action levels in the area near well GMW-62 will be contained and pulled back to the DFSP Norwalk site property via an expansion of the existing DFSP Norwalk GWTS. An additional 6-inch diameter extraction well will be installed within the site boundaries and an additional 4-inch diameter groundwater monitoring well will be installed in the park within the capture zone to gauge system performance.

First Quarter 2009 Sentry Groundwater Monitoring Results

Mr. Hassan said that for the First Quarter 2009 Sentry Groundwater Monitoring, 80 wells were gauged and 11 wells were sampled. Free product was detected in three wells (GW-15, TF-17, and TF-20) with thickness measured as 0.04, 1.61, and 0.61 feet. Groundwater elevations generally decreased in the uppermost aquifer beneath the site, which is likely a seasonal change. He next displayed a chart with the concentrations detected. He pointed out wells GMW-63 and -64, which are closest to the school, which were non-detect for all chemicals. He pointed out the concentrations in wells GMW-60 and -61, which were the wells that triggered the park investigation.

Planned Activities

Mr. Hassan said that Parsons will continue the weekly system inspections, required sampling, evaluation, and optimization. They conducted the second quarter groundwater monitoring semiannual event last week. Other planned activities include:

- Weed abatement.
- GWTS expansion in the eastern area to cover groundwater under Holifield Park. A six-inch diameter well will be incorporated into the existing treatment system.
- GWTS upgrade (to include purchase and installation of an additional treatment vessel). This will allow for less-frequent change-out of the GAC. TBA goes through carbon quickly, so this new vessel will allow longevity of the carbon.
- SVE system upgrade and restart (this is the conversion from thermal oxidation to carbon, which will take place over the next few months).

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- Supplemental on-site investigation:
 - Northeast corner (north of wells GMW-60 and -61, to ensure there are no sources)
 - Water tank area
 - Truck fill area – historical data review, confirmation sampling, area assessment and remedial strategy. They will discuss this with KMEP. Groundwater needs to be addressed in this area.

Web Site

Tim Whyte announced that a web site has been created for the project in response to a request by Congresswoman Napolitano. The site has a simple design but contains a lot of information. It is located at www.norwalkrab.com. It contains meeting minutes, presentations, fact sheets and newsletters. The most useful section may be the environmental reports section. PDF copies of the reports will be posted, so RAB members will be able to go to the web site if they do not wish to receive hard copies. DESC and KMEP still need to review and provide comments on the site. Mr. Hoskins suggested making sure it is easy to find contact information.

4. Set Date and Agenda for Next Meeting

The next quarterly RAB meeting will be held on **Thursday, July 30, 2009 at 6:30 p.m.** in the Norwalk Arts & Sports Complex.

5. Public Comment Period

Mr. Hoskins asked about the phytoremediation trees. Ms. Chou said that the groundwater is now clean in that area. Mr. Hoskins suggested repeating this process at the park. Ms. Chou said that it would have to be a City issue, since the City controls the park.

Lt Col Ramer provided a site disposition update. He said that the Air Force Real Property Agency has received an unsolicited bid for demolition of the tanks. It looks like the bid will be accepted. It would take about 90 days to complete the contract paperwork. The contractor would take down all the tanks, pipes, the Truck Rack, and everything with recyclable metals. The work would take about three months to complete. Therefore it is possible that the tanks could be gone within six months. The contractor would be responsible for obtaining necessary permits from the City and would use a crew of about 5 or 6 people. Removal of the tanks should speed up remediation, as they would have better access to the areas beneath the tanks. It should also make it easier for a developer to come in and start work [once one is chosen]. Mr. Osborn asked Lt Col Ramer to provide KMEP with a work schedule when available. KMEP may want to have one of their personnel on site. Mr. Hoskins said he would hope that they would maintain the same level of respect for the neighbors as they did during the last project. Lt Col Ramer said the contractor would be working standard work hours, Monday through Friday.

Mr. Hoskins made a motion to adjourn the meeting. Lt Col Ramer seconded the motion. A vote was taken, and all were in favor. Mr. Osborn adjourned the meeting at 7:43 p.m.

ACTION ITEMS

Item	Responsible Party	Due Date
Next Quarterly RAB meeting	All	07/30/09