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Meeting Minutes

Meeting Subject: Norwalk Tank Farm Restoration Advisory Board (RAB) Quarterly Meeting	Meeting Date: <u>31 January 2008</u> Meeting Time: 6:30 p.m. Meeting Place: Norwalk Arts & Sports Complex
RAB, PROJECT TEAM, AND OTHER ATTENDEES	
<u>RAB Community Members</u> E. Garcia B. Hoskins M. McIntosh (Co-Chair) W. Miller T. Winkler	<u>Other Members</u> A. Figueroa (City of Norwalk) S. Hariri (DTSC) J. Holdren (City of Cerritos) J. Hu (RWQCB) Lt. Col. Ramer (DESC-AMW) (Co-Chair)
<u>Other Attendees</u> C. Benson (Resident) G. Benson (Resident) B. Cardenas (Office of Rep. Napolitano) S. Chou (Geomatrix) R. Hassan (Parsons) K. Lee (RWQCB) M. Lucas (Parsons) S. Osborn (KMEP) S. Rosen (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> N. Matsumoto (WRD) M. Pitta (KMEP) (Co-Chair)	
<u>Not Attending</u> Dr. Duran (OCCS) Dr. Landolph (OCCS)	
<u>BACKGROUND</u> DESC-AMW and KMEP are conducting environmental cleanup activities at the area in and around the former Defense Fuel Support Point Norwalk, also known as the Tank Farm, located at 15306 Norwalk Boulevard, Norwalk, CA. The RAB is an advisory committee of local citizens and project members that reviews and comments on documents relating to the environmental cleanup. All RAB meetings are open to the public and are scheduled quarterly on the last Thursday of the month at 6:30 p.m. in January, April, July, and October unless otherwise voted on by the RAB community membership.	

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1. Introduction Lt Col Jon Ramer, DESC Co-Chair, Meeting Chair

Lt Col Jon Ramer called the meeting to order at 6:47 p.m. Mary Jane McIntosh introduced the guests attending the meeting, including Norwalk residents Cal and George Benson, and Suzi Rosen from Geomatrix. Lt Col Ramer asked for comments on the draft minutes from the October 25, 2007, RAB meeting. Bob Hoskins made a motion to accept the minutes as written. Ms. McIntosh seconded the motion. The minutes were approved without opposition. Ms. McIntosh announced that she had plaques made for retired RAB members David Caughey and Wanda Sterner as thanks for their many years of service on the RAB.

2. KMEP Update Steve Osborn, KMEP, and Shioh-Whei Chou, Geomatrix Consultants

Second Addendum to RAP Update

Steve Osborn said that remediation system enhancements per the Second Addendum to KMEP's Remedial Action Plan (RAP) included the installation of pumps in seven new wells and MW-O-1 (in the South-Central area) to lower the water table and to enhance product recovery. Two 1,500-lb liquid phase carbon vessels were replaced with two 2,000-lb liquid phase carbon vessels. A second air compressor was installed. The electrical components of groundwater treatment system have been upgraded. They also have started operation of the new dual-phase extraction wells. He said that the groundwater treatment system is 100 percent operational. Eugene Garcia asked how long the enhancements took to complete. Shioh-Whei Chou said that they took about two months and were completed in December 2007. Mr. Osborn next showed a couple of photographs of the new carbon vessels and the air compressor. Other adjustments included adjusting the pump intake depths for the South-Central area to lower the water table. Pumping rates were reduced in the West Side Barrier system based on reduced lateral extents of 1,2-DCA (1,2-dichloroethane) and MTBE (methyl tertiary-butyl ether) and increased pumping in the South-Central area. A leak detection system was installed at five pipeline block valves: three block valves located near southwestern corner of the site; one located near the northeastern corner of the site; and one at the southeastern 24-Inch Block Valve location. The Intermediate Block Valve riser is connected to the SVE system. Mr. Osborn next showed two photographs of the new leak detection system. He said that there is a cable that goes underneath the valve. An above-ground light flashes if the cable comes in contact with hydrocarbons. They will be monitored three times a week by line riders. If a leak is detected, emergency procedures would be put into place immediately. Kwang Lee from the Regional Water Quality Control Board (RWQCB) asked if there was a report, and if they could get a copy of the construction plans. Ms. Chou said there was not a report available yet. The system was just installed in December 2007. Lt Col Ramer asked that KMEP provide Parsons with the emergency contact information, in case their personnel see any lights flashing while on site.

Remediation Operations Update

Ms. Chou displayed a map of the remediation systems. She said that after the upgrades, they now have 18 total fluids (product and groundwater) extraction wells and 2 groundwater extraction wells in the South-Central Plume area; 2 total fluids extraction wells in the Southeastern 24-Inch Block Valve area; and 3 groundwater extraction wells in the West Side Barrier area.

The groundwater/product extraction system saw an increase of almost double in the fourth quarter 2007 as compared to the third quarter 2007: the South-Central Plume area had 1,264,000 gallons extracted; the Southeastern 24-Inch Block Valve area had 436,000 gallons; the West Side Barrier area had 372,000 gallons. Approximately 11 gallons of free product were manually recovered by hand bailing.

Total groundwater extracted since September 1995 includes: 26.6 million gallons from the South-Central Plume area; 8.2 million gallons from the Southeastern 24-Inch Block Valve area; and 26.5 million gallons from the West Side Barrier area. A total of 61.3 million gallons of groundwater have been extracted from all three areas, and 8,917 gallons of free product have been removed. Mr. Garcia asked if the manual product recovered was significant. Ms. Chou said that it is more than we have seen in the recent past. There was zero

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recovered immediately prior to the upgrades. They expected to recover more free product, because the increase in pumping lowers the water table, so the free product was able to mobilize in the wells and could then be recovered.

Ms. Chou said that the groundwater/product extraction system operated continuously during the fourth quarter of 2007 with the following exceptions: the system was shut down for electrical upgrades; it was also shut down for the fourth quarter 2007 groundwater sampling. The liquid phase carbon vessel upgrades were performed during this time to minimize system down time. Overall, the system operated for 70 percent of the time during the quarter. Ms. Chou also showed a graph of the cumulative groundwater and product extracted.

Ms. Chou next said that after the installation of the seven new wells, the Soil Vapor Extraction System now 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. Approximately 372 gallons of fuel were removed and from soil and destroyed by catalytic oxidation during the fourth quarter. Approximately 452,340 gallons equivalent of fuel have been removed from soil and destroyed by catalytic and thermal oxidation since September 1995. The SVE system has operated for approximately 58,319 hours since September 1995. It operated continuously during fourth quarter 2007 with the following exceptions: during fourth quarter groundwater sampling; and from 11/16/07 to 1/11/08 for troubleshooting and repair of the oxidizer's combustion system. Overall, the system operated for 51 percent of the time during the quarter. Ms. Chou also showed a graph of the cumulative fuel removed by vapor extraction, which shows a slight increase in the past six months, after the addition of the new SVE wells.

Planned activities include continuing the weekly system inspections; continuing data collection for monitoring and evaluation of remediation systems; and continuing to make adjustments to remediation wells to optimize remediation (i.e., turn pumps on/off, open/close wells to SVE depending on vapor concentrations, and adjust pump intake depths).

Conceptual Site Model

Ms. Chou said that KMEP is currently working with the RWQCB to develop a conceptual model showing generalized lithologic conditions and remediation progress. They are using EarthVision, a 3-dimensional geospatial modeling software program, to create a conceptual model of the South-Central area. The model development steps includes: reviewing and updating the database (including adding the new wells); developing a conceptual lithologic model (looking at available soil types); and developing a chemical distribution model (using benzene as a starting point). Ms. Chou next showed a two-dimensional map of benzene concentrations in 1998, followed by a three-dimensional view. The three-dimensional view shows the Bellflower Aquitard that separates the upper aquifer from the deeper Exposition Aquifer. Lt Col Ramer asked how impermeable the aquitard is. Ms. Chou said that it ranges from lean clay to silty clay. They are not seeing any vertical migration from the upper aquifer to the Exposition Aquifer. Ms. Chou next showed a two-dimensional and then a three-dimensional view of benzene concentrations in May 2007. Ms. Chou noted that since these models are conceptual, they do not show depths or scale. Mr. Hoskins asked about drilling wells into the Exposition Aquifer. Ms. Chou said that they use a special drilling technique to close the holes as you drill. They are very careful and drill slowly, so that contamination does not get pulled down into the Exposition Aquifer. She also said that the bottom of the upper aquifer is 50 to 60 feet below ground surface, and that the thickness of the aquitard varies but is at around 70 feet. The Exposition Aquifer is about 120 feet below ground surface. These wells are not used for drinking water.

Additional Assessments

Ms. Chou said that in a letter dated December 3, 2007, the RWQCB requested two work plans for the off-site 24-Inch Block Valve area. A work plan for soil gas sampling and surface emission testing was submitted to the RWQCB on December 14, 2007. A work plan for additional subsurface assessment was submitted to the RWQCB on January 25, 2008. The objectives of the work plans are to:

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- Further assess the presence of volatile fuel constituents in soil gas
- Evaluate potential surface emissions of volatile fuel constituents if indicated by results of soil gas survey
- Delineate the lateral extent of dissolved fuel constituents
- Delineate the vertical extent of dissolved fuel constituents
- Confirm the depth and presence of the Bellflower Aquitard

Ms. McIntosh next mentioned that she had requested some information for City Manager Ernie Garcia regarding an estimate of percentage of cleanup completed. Ms. Chou then showed a PowerPoint animation demonstrating the distribution of free product from 1997 through 2007. Based on the lateral extent, Ms Chou estimated that there has been an 80 percent reduction; however, this does not take into account depth or thickness reductions. She said that even if the lateral extent may be the same in places, concentrations inside the extent have decreased. Ms. McIntosh asked if she could make an estimate of concentration reductions at the next meeting. Ms. Chou said that she could take a look at some of the concentrations from the 1990s and compare to today's concentrations for the July meeting.

4. DESC-AMW Update Redwan Hassan, Parsons

General Site Activities

Redwan Hassan said that absorbent socks were installed in wells containing residual product. They were changed out on October 4, October 31, November 9, November 15, and December 4. Socks were installed in well GMW-4 on October 19 and in well MW-9 on October 31. These two wells are on-site near the Truck Fill Stand. Weed abatement began October 23. The total fluids were purged from GMW-04 and MW-09 on November 15. The air compressor was repaired on December 9. The VW Eastern Boundary SVE Line was repaired on December 10. The fence on the north side of the facility near Excelsior Street was repaired on December 26. Mr. Hassan next showed some before and after photographs of the weed abatement and fence repair.

Remediation System Upgrade Summary

Mr. Hassan said that the electrical components to wells GW-13, GW-14, and GW-15 were connected on October 25. Problems with the variable frequency drive were identified and corrected on December 15. They installed and hydrated carbon for the new fiberglass cell December 16. Transmitter and receivers for remote control of wells GW-13, GW-14, and GW-15 were designed and built. Within the past couple of days, they procured level sensors for the air stripper, sump, and surge tank to replace malfunctioning equipment, and they also procured an air stripper cap.

Remediation System Performance Update

Since April 1996, approximately 427,017 gallons of total hydrocarbon mass were removed. This includes approximately 215,183 gallons recycled and destroyed and an estimated 211,830 gallons of hydrocarbons destroyed due to enhanced biodegradation. Approximately 42.2 million gallons of groundwater were treated. A detailed breakdown of the 215,183 gallons that has been recycled and destroyed includes:

- 55,555 gallons of free product recovered and recycled (this is a slight increase due to the absorbent sock recovery)
- 1,397 gallons of dissolved-phase hydrocarbons recovered and treated through onsite treatment system
- 158,231 gallons of volatile hydrocarbons recovered through SVE and treated through onsite treatment system

Mr. Hassan next displayed a slide showing these numbers on a graph. The next slide gave a graph with an additional breakdown of the hydrocarbon mass removal from the horizontal wells, the Truck Fill Stand area, biodegradation, the vapor wells in the east and in the west, and the recently added vapor wells on the eastern boundary.

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Holifield Park Investigation Update

Mr. Hassan said that investigations at Holifield Park were conducted in December 2006 and June/July 2007. As presented by Loren Lund at the previous meeting, the investigations found that there is no risk to park users. The final report was submitted to RWQCB on January 10. The work plan for additional investigation and to install a groundwater cleanup system was submitted to RWQCB on January 25. The work will provide for additional delineation. The new cleanup system will be incorporated into the existing remediation system. Once approval is received from the Water Board, the investigation and system installation will commence.

2nd Semiannual 2007 Groundwater Monitoring

Mr. Hassan said that draft copies of the Second Semiannual 2007 Groundwater Monitoring Report were distributed tonight. Since the report is still in draft form, Parsons will send out replacement pages if needed. Mr. Garcia said that the RAB needs to get the reports sooner, so they will be able to discuss it at the meeting. Ms. McIntosh suggested that the semiannual and Sentry Event monitoring schedule be moved up one month, so that the consultants have more time to prepare the reports prior to the RAB meetings. Jeffrey Hu said that this would be acceptable to RWQCB, as long as the two monitoring events are not conducted in consecutive months. Ms. Chou said she would coordinate the new schedule with Parsons. Mr. Hassan said that Parsons would respond to any questions on this draft report via email and mail prior to the next RAB meeting. Ms. McIntosh also requested that the community RAB members get hard copies of the reports, because it is difficult to receive the large documents via email.

Mr. Hassan said that groundwater elevations and free product conditions were similar to those observed in May 2007. Groundwater elevations during November 2007 were, on average, about 0.8 foot lower than May 2007. Overall flow direction in the upper groundwater zone was to the northwest which is consistent with May 2007 and previous months. Lateral extent and concentrations of the dissolved-phase TPH, benzene, 1,2-DCA, and MTBE plumes were similar to those detected during May 2007. TPH was detected in one well (EXP-3) in the Exposition Aquifer. Mr. Hassan next showed groundwater elevation and free product plume maps from November 2006 and November 2007. He noted that the groundwater flow direction was about the same. Next he showed TPH maps from November 2006 and November 2007. He said that the November 2007 map shows a general decrease and has more isolated areas of TPH. Next he showed benzene maps from November 2006 and November 2007 and noted that they were similar. Next he showed 1,2-DCA maps from November 2006 and November 2007. He then showed MTBE maps from November 2006 and November 2007 and noted that concentrations in general are the same in 2007 as in 2006.

Ms. McIntosh asked about Page 4-2 of the report that references the benzene increase in wells GMW-35, GMW-45, and GMW-57 relative to the May and August results. She also asked about increases in well GMW-62 in the Eastern area. She wanted to know what was being done to address the increase in this well and the lack of decrease in well GMW-58. Mr. Hassan said that new wells will be starting in two weeks in that area, so by next meeting there should be some changes. It could also be a result of biosparging, which could be pushing some of the plume. To address this, Parsons installed large diameter wells. Mr. Hassan said that this well is sampled in the Sentry Event, so it should be sampled within the next couple of weeks. Then the April sampling should show some progress. He said that the preliminary results of the April sampling should be available for the July RAB meeting.

Ms. McIntosh asked about Page 4-4 and the decrease in MTBE found in well GMW-36. She asked if there are any new technologies out there that we could look at to address MTBE. Mr. Hu said no. MTBE is very mobile and travels fast, about the same speed as groundwater. The best way to address it is to contain the plume by enhancing the barrier wells and enhancing the treatment system. He said that RWQCB asked for the treatment system to be expanded at the Park area. Mr. Osborn said that RWQCB requested that KMEP further delineate the 24-Inch Block Valve area. Based on the data received, KMEP will expand the system to meet their five-year closure goal. Joe Holdren asked if this was the first time an Exposition well had a detection. Mr. Hassan said on some occasions there are detections with very low concentrations. Ms. Chou

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said that the detection did not contain any VOCs (volatile organic compounds), so the detection may be an anomaly. KMEP's sample of the same well came back non-detect. Parsons' sample detected TPH_{fp} (total petroleum hydrocarbons as free product) at 1,500 parts per billion, and non-detect for BTEX (benzene, toluene, ethylbenzene, and total xylenes). Ms. Chou said that the Exposition wells are sampled quarterly.

Conceptual Site Modeling Update

Mr. Hassan said that a conceptual site model has been requested by the RWQCB for both KMEP and DESC. Parsons has created 3D models for TPH and BTEX in the uppermost groundwater zone based on data from multiple years. They have yet to add the lithology (the aquifers). So far, they have used the chemicals primarily found in the groundwater. Models show distribution of TPH and BTEX concentration results for the second semiannual events of 1996, 2000, 2003, and 2007. These years were used because a consistent number of wells were sampled. The models demonstrate that the plume size and TPH/BTEX concentrations have decreased over time due to remediation and natural attenuation. Next Mr. Hassan showed the TPH model from November 2000 and then November 2007. He said they will add soil types in the future. Next he showed models of BTEX concentrations in November 2000 and November 2007. Both the TPH and BTEX models show decreased concentrations. The concentrations are located in the areas of the total fluids wells. The models will be further refined.

Planned Activities

Mr. Hassan said that Parsons plans to continue routine operation, maintenance, monitoring, and required sampling of the remediation system. They plan to evaluate the vapor extraction system to see if concentrations are decreasing enough to convert to bioventing instead of using thermal oxidation. He will give an update at the July meeting. Parsons also plans to install flow check valves at carbon vessels, install flow switch at filters, and install transmitter and receivers. They will conduct pipe network repairs and evaluate the thermal oxidizer system.

The groundwater system expansion is expected to be complete in February. System start-up is anticipated in February. Additional groundwater investigation will be conducted at Holifield Park. After they get additional data, Parsons will evaluate if they can incorporate remediation into the existing treatment system. The remediation system installation at Holifield Park will include additional monitoring wells along the school property boundary.

5. Set Date and Agenda for Next Meeting

The next quarterly RAB meeting will be held on **Thursday, April 24, 2008, at 6:30 p.m.** in the Norwalk Arts & Sports Complex. The agenda is to include the remediation updates, Holifield Park Update, and Groundwater Monitoring Update.

6. Public Comment Period

Ms. McIntosh gave an update on Congresswoman Grace Napolitano's Town Hall meeting held on Saturday, January 26, 2008. She said it went well and thanked DESC, KMEP, Parsons, Geomatrix, and RWQCB for their hard work and participation. She estimated that there were 65 people there, including representatives from the AQMD and EPA. Benjamin Cardenas also thanked everyone on behalf of the Congresswoman. He said that the Congresswoman was pleased with the event. Ms. McIntosh said that the Congresswoman suggested a web site for the project.

Regarding the disposition of the site, Ms. McIntosh said that Anne Schuyler and Lee Conesa could not make it to tonight's RAB meeting to give an update. She said that at the Town Hall meeting, Ms. Schuyler said that there would be a meeting for potential developers on March 6. RAB members will be invited, and the \$50 fee will be waived for them. Lt Col Ramer said that the government intends to trade the Tank Farm land in return for construction of new facilities at March Air Reserve Base.

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Ms. McIntosh made a motion to adjourn the meeting. Mr. Hoskins seconded the motion. The motion passed without opposition. Lt Col Ramer adjourned the meeting at 8:30 p.m.

ACTION ITEMS

Item	Responsible Party	Due Date
Respond to any Monitoring Report Questions	Parsons	Prior to April Meeting
April Sampling Results	Parsons	July Meeting
Concentration reduction percentage estimates	Geomatrix	July Meeting
Next Quarterly RAB meeting	All	4/24/08