FINAL

Meeting Minutes

Meeting Subject: Norwalk Tank Farm Restoration Advisory Board (RAB) Quarterly Meeting	**Meeting Date**: **26 April 2007** **Meeting Time**: 6:30 p.m. **Meeting Place**: Norwalk Arts & Sports Complex

RAB, PROJECT TEAM, AND OTHER ATTENDEES

RAB Community Members
D. Caughey
E. Garcia
B. Hoskins
M. McIntosh (Co-Chair)
W. Miller
W. Sterner
T. Winkler

Other Attendees
J. Brady (Geomatrix)
S. Chou (Geomatrix)
S. Gandhi (Parsons)
S. Hariri (DTSC)
R. Hassan (Parsons)
K. Lee (RWQCB)
B. Molna (Arcadis)
K. Olowu (DESC)
Dr. M. Saul (NLMUSD)
C. Sloacum (Sares-Regis)
T. Spencer (Resident)
T. Whyte (URS)

Absentees
J. Holdren (City of Cerritos)
N. Matsumoto (WRD)
Lt. Col. Ramer (DESC-AMW) (Co-Chair)

Not Attending
Dr. Duran (OCCS)
Dr. Landolph (OCCS)

Other Members
A. Figueroa (City of Norwalk)
J. Hu (RWQCB)
M. Pitta (KMEP) (Co-Chair)

Acronyms:

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

BACKGROUND

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.

MEETING MINUTES **26 April 2007**

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

Mary Jane McIntosh called the meeting to order at 6:39 p.m. She asked for comments on the draft minutes from the January 25, 2007, RAB meeting. David Caughey made a motion to accept the minutes as written. Bob Hoskins seconded the motion. The minutes were approved without opposition.

Dr. Kwang Lee of the Regional Water Quality Control Board (RWQCB) announced that Elizabeth Erickson has been transferred to work on other sites, and therefore would no longer be the Project Manager for the Tank Farm site. The new Project Manager will be Jeffrey Hu. Mr. Hu is a professional engineer who has worked for RWQCB for 10 years. He also has previous experience on the Tank Farm project.

Ms. McIntosh also welcomed Dr. Maureen Saul from the Norwalk-La Mirada Unified School District; Curtis Sloacum from Saeris-Regis; and Barry Molna from Arcadis.

2. KMEP Update Mike Pitta, KMEP, and Shiow-Whei Chou, Geomatrix Consultants

Second Addendum to RAP Update

Shiow-Whei Chou said that the Second Addendum to the RAP (Remedial Action Plan) was submitted to the RWQCB in November 2006. The final document incorporated comments received from the RWQCB and the RAB (Restoration Advisory Board). The RWQCB granted implementation approval on April 2, 2007. KMEP plans to start next week. Total fluids pumps have been ordered and received. Soil vapor extraction conveyance piping has been inspected and repaired. They are currently planning and mobilizing for field work (including retaining subcontractors, coordinating off-site access, permitting, and updating health and safety plan). In May through July 2007, they will conduct field work, which will include pilot testing, well installation, well development, pump installation, and system modifications). System startup and evaluation is also anticipated to occur during this time. They plan to update the RAB on a quarterly basis from July 2007 to July 2008. In August 2008, they plan to submit the first annual remediation system evaluation report

Remediation Operations Update

Ms. Chou showed a map of the current remediation systems and pointed out the West Side Barrier area, the south-central cleanup area, and the southeast cleanup area. Wanda Sterner mentioned that the DESC's new vapor extraction wells were not shown, and there is nothing shown in the truck fill stand area. Ms. Chou said this map only shows general remediation areas and could be updated for future meetings. Then she said that the Groundwater/Product Extraction System has the same number of wells as previously reported: eight groundwater extraction wells in the West Side Barrier area; six total fluids (product and groundwater) extraction wells and two groundwater extraction wells in the South-Central Plume area; and two total fluids extraction wells and one groundwater extraction well in the Southeastern 24-inch Block Valve area. They showed similar recovery rates this quarter as to the previous quarter. The total groundwater extracted by the system since the January 2007 RAB meeting included: 281,100 gallons from the South Central Plume area; 133,000 gallons from the Southeastern 24-inch Block Valve area; and 753,200 gallons from the West Side Barrier area. There were 13 gallons of free product recovered manually. Total groundwater extracted since September 1995 includes: 24.4 million gallons from the South Central Plume area; 7.6 million gallons from the Southeastern 24-inch Block Valve area; and 25.6 million gallons from the West Side Barrier area. A total of 57.7 million gallons of groundwater have been extracted, and 8,846 gallons of free product have been removed. Ms. Chou said that the system operated continuously during the first quarter of 2007 with the exceptions of during pump maintenance and during air compressor service. The system operated for 88 percent of the time during the quarter, which was an increase over the previous quarter. Ms. Chou also showed a graph of the cumulative groundwater and product extracted. She said that free product recovery has leveled off, but that they hope to increase it with the new wells.

Ms. Chou said that the Soil Vapor Extraction (SVE) System has the same number of wells as previously reported: 17 onsite and 5 off-site vapor extraction wells in the South-Central Plume area; and two vapor extraction wells in the Southeastern 24-inch Block Valve area. Approximately 300 gallons equivalent of fuel

were removed from soil and destroyed by thermal oxidation since the January 2007 RAB meeting. Approximately 451,500 gallons equivalent of fuel were removed from soil and destroyed by thermal oxidation since September 1995. The SVE System has operated for approximately 54,829 hours since September 1995. She said that the SVE system operated continuously during the first quarter of 2007 with the exception of during replacement and upgrading of belts and pulleys on the SVE blower/motor assembly. The system operated for 70 percent of the time during the quarter, which was an improvement over the previous quarter. Ms. Chou next showed a graph of cumulative fuel recovered by SVE, which has leveled off recently. The graph of the past six months shows that as long as the system is on, they are recovering fuel.

Ms. Chou next displayed a map showing the proposed new remediation wells in the south-central area. The map also showed the approximate radius of influence of the existing and of the proposed wells. She said that with more wells, they can enhance the product recovery.

Ms. McIntosh said that this area became a concern due to recent high concentrations found in well GMW-27. She said it needs some explanation. She requested that this well be monitored closely in the future. Tracy Winkler asked about well GMW-O-14. Ms. Chou said that it was tested and while still high, it did show a decrease from one year ago.

Sentry Event Update

Ms. Chou said that during the March Sentry Event, 20 wells were sampled, including four Exposition wells. No volatile organic compounds (VOCs) were detected in Exposition wells. Groundwater elevations generally decreased since December 2006 in the uppermost aquifer beneath the site. In the south-central area, VOC concentrations decreased or remained similar to those observed in the same wells in December 2006. In the southeastern area, free product was again not detected in well GMW-36. Methyl tertiary butyl-ether (MTBE) concentrations were similar to December 2006 results in other wells sampled in southeastern area. In the western off-site area, 1,2-dichloroethane (1,2-DCA) and MTBE were detected in one well (WCW-7) at concentrations below RBCA levels.

3. DESC-AMW Update Redwan Hassan, Parsons

Quarterly Groundwater Monitoring Event

Mr. Hassan said that the first quarterly monitoring event was conducted in March 2007. It coincided with the Sentry sampling. He said that Parsons would be mailing the data to the RAB members by next week. During the event, 54 wells were gauged, five wells contained free-phase product, and seven wells were sampled in the eastern area. He said that the semiannual event is scheduled for April 30 through May 4, 2007, with Geomatrix. They will also perform the second quarter monitoring at this time. Mr. Hassan next showed a slide with a summary of the first quarter data. Most of the detections were in the eastern area, near the fence. Benzene and total petroleum hydrocarbons (TPH) concentrations increased in some wells and decreased in others. In particular, benzene decreased in wells GMW-58 and GMW-60. TPH increased in well GMW-59 and decreased in well GMW-58. Mr. Hassan also showed a map with the well locations.

Holifield Park & Dolland Elementary School Investigation Activities

Due to the unresolved access agreement issue between the Norwalk-La Mirada Unified School District and DESC, it has been decided to proceed with the implementation of the second work plan (soil and groundwater investigation) and the soil gas survey step-out sampling at the Holifield Park only. The indemnification clause has been the sticking point in the negotiation. Data obtained from this second phase of the investigation, along with previous results from the soil gas survey and soil sampling, will be evaluated to see whether or not sampling at the school area is needed. They recently had a conference call with RWQCB to discuss this and to evaluate the data. Ms. McIntosh asked RWQC to comment on this. Dr. Lee said that RWQCB sent a letter to the City and to the District, saying that they want to clarify if contamination is at the park and school, because they are concerned about the kids. DESC sampled along the boundary. They looked at the preliminary data, which were non-detect. Groundwater flows from high areas to low areas. The school is on a high area compared to the low area of the Tank Farm, so therefore the contamination would be

flowing away from the school. However, Dr. Lee said that RWQCB still thinks it would be a good idea to test at the school and park.

Mr. Hassan said that resulting from the Soil Gas Survey, step-outs around B-24 and B-50 will be drilled during the soil/groundwater investigation. At B-24, step-outs will be drilled to the north, south, and east at a distance of 50-feet from B-24. At B-50, a step-out will be drilled to the north at a distance of 50-feet from B-50. Soil gas samples will be collected at 5, 15, and 25 feet below ground surface. Mr. Hassan then showed the proposed soil and groundwater sampling locations on a map.

Groundwater System Upgrade

Mr. Hassan said that RWQCB requested the containment of the northwest dissolved-phase plume. To accomplish this, they increased the flow rate of the wells, so they needed to upgrade the system capacity. In addition, some of the system parts are old, since the system was first built in 1995-1996. The upgrades included:

- Replacement of two trays on the air stripper
- Refurbishment of two carbon vessels
- Installation of a Arsenic Removal Tank of higher capacity [50 gallons per minute (gpm)]
- Installation of Automation Devices (PLC processor & touch screen panel)
- Installation of Rediflo Submersible pumps in wells GW-1, GW-2, GW-3 & GW-7
- Installation of pH pump (for bleach) and polymer (for carbon vessels)
- Collection of grab samples from influent and effluent of GWT system
- Net capacity increase from 40 gpm to 90 gpm

Mr. Hassan also showed a picture of the tank replacement.

Baseline GWT Sample Results

Mr. Hassan discussed a table showing the baseline groundwater treatment (GWT) sample results. The system was sampled on March 1, 2007, after the upgrades were completed. The results showed that the effluent concentrations for arsenic were much lower than previously observed. BTEX components (benzene, toluene, ethylbenzene, and total xylenes) were below laboratory reporting limits. Additional analyses were conducted for total suspended solids, biological oxygen demand, turbidity, and total sulfides from the influent and effluent of the GWT system.

Ms. Winkler had a question about the influent and effluent. Mr. Hassan said that the recovered groundwater goes into a carbon treatment system. There is a discharge limit, regulated by the National Pollutant Discharge Elimination System (NPDES), which they have to meet prior to releasing the treated groundwater into the storm drain. Ms. Winkler asked how long has arsenic been there. Mr. Hassan said it has been ongoing since 2003-2004. Dr. Lee said that DESC has to discharge to their requirements. If they do not meet the requirements, then they will receive mandatory penalties.

Central Plume Remediation

Mr. Hassan said that since April 1996, approximately 423,181 gallons of total hydrocarbon mass were removed: 55,538 gallons of free product were recovered; 1,397 gallons of dissolved phase hydrocarbons were recovered; 151,352 gallons of volatile hydrocarbons were recovered through soil vapor extraction; and estimated 196,750-plus gallons of hydrocarbons were destroyed due to enhanced biodegradation. Approximately 42.3 million gallons of groundwater were treated. The GWT system is operational now but has been temporarily shut off for semiannual sampling to allow the wells to get to static levels. 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, and the newly installed vapor wells in the east and in the west.

Eastern Boundary Update

Mr. Hassan said that they submitted the Eastern Boundary Work Plan to RWQCB. The work plan was in line

with the recommendations in the Revised RAP and includes remediation for the eastern area. The park investigation is still ongoing. Components of the plan recently completed includes the installation of vapor extraction wells, the installation of vapor monitoring wells to monitor vapor concentrations, and the installation of biosparge wells

Ongoing work includes the installation of a new groundwater extraction well within a couple of days. Mr. Hassan showed a picture of the installation of one of the wells, as well as a map with the locations of the new wells. They hope to capture the plume and treat it with these new wells.

Pipe Declogging

Mr. Hassan said that the pipes leading from the wells to the treatment system were installed a long time ago. The flow did not compute, which may have been due to the pipes being clogging by biofouling. Therefore, they are currently in the process of cleaning the pipes by using an acid wash and other methods. Mr. Hassan showed a picture of the pipe declogging in progress.

Schedule

Mr. Hassan said that the revised schedule for the Revised RAP includes the following, some of which is already in progress:

(April 2007)

- Finish implementing scope of work on eastern boundary
- Install groundwater extraction wells as per addendum to Revised RAP
- Continue operation of GWT system and SVE system
- Initiate biosparging in the central Tank Farm area and the eastern boundary
- Install adsorbent socks in the total fluids wells
- Pipe declogging operation

The upcoming schedule includes the following:

(May 2007)

- Implement remaining scope of work for the central Tank Farm area as per the revised RAP
- Perform second quarter groundwater monitoring

(April/July 2007)

- Update RAB
- Perform soil/groundwater and soil gas survey step-outs in the Holifield Park

(October 2007)

- Stop SVE operation and perform vapor monitoring from vapor monitoring probes
- If low methane concentrations are observed, switch to bioventing

(November 2007)

- Stop SVE operation and perform vapor monitoring from vapor monitoring probes
- If low methane concentrations are observed, perform bioventing along with SVE

(May 2008)

- Perform respiration test

(July 2008)

- Submit first annual progress report

Ms. McIntosh asked about the data for the Holifield Park work. Mr. Hassan said that as soon as the data are confirmed, they would be shared with the RAB. Ms. McIntosh requested that if they are not ready by the next RAB meeting, that they be delivered to the RAB members as soon as possible.

Gene Garcia asked about the adsorbent socks. Sumeet Gandhi of Parsons said that they will be placed in the wells to absorb product. Mr. Pitta added that the socks are like what are used in oil spills. They are like a sponge and can absorb one to two gallons. Ms. Sterner suggested putting on in well GMW-4 as a test, since

there is always a sheen in that well. Mr. Garcia suggested putting socks in all wells that have a product sheen. Mr. Pitta said he would look into it.

Dr. Lee said that this would be a good time to look at the new data. RWQCB will have the new project manager meet with DESC and KMEP. They are going to look at data from the beginning to get a conceptual site model, which can show us where we are in the cleanup process. They will present it at the next meeting.

Ms. McIntosh next discussed some questions on the latest monitoring report. She requested that wells GMW-57, 58, 59, 60, and 61 to be sampled quarterly and the results to be included in future reports. In addition, she said she is still concerned that we do not have a handle on where the increasing benzene concentrations are coming from in the Eastern Boundary area. She mentioned a release of five or six years ago from a previously unknown pipeline, and wondered if it could be a similar situation. She suggested a geophysical survey in the area. Mr. Hassan said that they investigated in the park and school area to find a source. When they conduct the next set of sampling at the park, they will review the data. If they can rule out a source in the area, then they will need to look inside the site for a possible source. They have some ideas. Before the next RAB meeting, they will get the data and discuss it and propose what to do next. They have looked around in the field behind wells GMW-60 and 61, but it is possible that they could perform a geophysical survey in the area. Ms. McIntosh asked if they could have a plume map by the next meeting. Mr. Hassan said they would have at least the eastern boundary of it. Dr. Lee said that the park was Air Force property a long time ago, which is part of the reason why they want to investigate it to see if there are any sources there. Mr. Hu pointed out that changes in concentrations sometimes have to do with changes in groundwater fluctuations.

Mr. Garcia asked about the discrepancies in the results from the duplicate samples in the Sentry Event. Ms. Chou said she will look into it, particularly wells GMW-O-14 and 15. Dr. Lee said that samples have a holding time, and those particular samples may be past their holding times. He suggested taking a few additional samples.

Adriana Figueroa asked when they would be sampling at the park. Mr. Hassan said within the next couple of weeks. Ms. Figueroa requested that they notify her in advance of the sampling.

5. Set Date and Agenda for Next Meeting

The next quarterly RAB meeting will be held on **Thursday, July 26, 2007, at 6:30 p.m.** in the Norwalk Arts & Sports Complex. The agenda is to include the Groundwater Monitoring Semiannual Event (KMEP); Eastern Boundary update and park testing update; conceptual site modeling update; and GMW-57-61, GMW-4, and GMW-27 sampling results.

8. Public Comment Period

Mr. Miller made a motion to adjourn the meeting. The motion was seconded by Mr. Hoskins and passed without opposition. Ms. McIntosh adjourned the meeting at approximately 8:15 p.m.

ACTION ITEMS		
Item	**Responsible Party**	**Due Date**
Monitor GMW-27 closely	DESC/KMEP	Quarterly
Mail Sentry Event data	DESC	5/4/07
Holifield Park data	DESC	when available
Conceptual Site Model Update	DESC/KMEP	7/26/07
GMW-57, 58, 59, 60, and 61 quarterly sampling	DESC/KMEP	7/26/07
Next Quarterly RAB meeting	All	7/26/07