Meeting Minutes

Mosting Subjects	Mosting Date: 24 April 2009		
Meeting Subject: Norwalk Tank Farm	Meeting Date: 24 April 2008 Meeting Time: 6:30 p.m.		
Restoration Advisory Board (RAB)	Meeting Place: Norwalk Arts & Sports Complex		
Quarterly Meeting			
RAB, PROJECT TEAM, AND OTHER ATTENDEES			
RAB Community Members	Other Members		
M. McIntosh (Co-Chair)	R. Dayeh (City of Norwalk – for A. Figueroa)		
W. Miller	Lt. Col. Ramer (DESC-AMW) (Co-Chair)		
T. Winkler			
	Acronyms:		
Other Attendees	CHHSLsCalifornia Human Health Screening		
S. Chou (Geomatrix)	Levels		
N. Curley (Norwalk Resident)	DESC-AMWDefense Energy Support Center		
R. Hassan (Parsons)	Americas West		
M. Lucas (Parsons)	DTSC Department of Toxic Substances		
S. Osborn (KMEP)	Control		
J & M. Rios (Norwalk Residents)	GSAGeneral Services Administration		
C. Slocum (Sares-Regis)	HHRA Human Health Risk Assessment		
T. Whyte (URS)	KMEPKinder Morgan Energy Partners		
	LNAPLLight non-aqueous phase liquids		
<u>Absentees</u>	MTBEMethyl tertiary butyl-ether		
A. Figueroa (City of Norwalk)	OCCSOffsite Chemicals Cleanup		
E. Garcia	Subcommittee		
S. Hariri (DTSC)	OEHHAOffice of Environmental Health		
J. Holdren (City of Cerritos)	Hazard Assessment		
B. Hoskins	1,2-DCA1,2-dichloroethane		
J. Hu (RWQCB)	RABRestoration Advisory Board		
N. Matsumoto (WRD)	RBCARisk-Based Corrective Action		
M. Pitta (KMEP) (Co-Chair)	RWQCBRegional Water Quality Control Board		
	SVESoil Vapor Extraction		
Not Attending	TPHTotal petroleum hydrocarbons		
Dr. Duran (OCCS)	URSURS Corporation		
Dr. Landolph (OCCS)	VOCsVolatile organic compounds		
_	WRD Water Replenishment District of		
II	a		

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.

Southern California

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

Mary Jane McIntosh called the meeting to order at 6:44 p.m. Ms. McIntosh introduced the guests attending the meeting, including Col. Shawn Walsh from DESC Headquarters in Fort Belvoir, Virginia; Richard Dayeh from the City of Norwalk, attending for Adriana Figueroa; Nancy Curley, a Norwalk Resident; Jose and Margarita Rios, Norwalk residents; and Curtis Slocum, a developer, and two of his environmental consultants from Tetra Tech. Ms. McIntosh asked for comments on the draft minutes from the January 31, 2008, RAB meeting. Bill Miller made a motion to accept the minutes as written. Lt Col Ramer seconded the motion. The minutes were approved without opposition.

Sale Update. Ms. McIntosh said that industry day was held in March for potential bidders on the sale of the property. Proposals are due in June. A developer should be chosen by the end of the year.

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

Review of Second Addendum to RAP Implementation

Steve Osborn reviewed KMEP's activities completed to date for the Second Addendum to the Remedial Action Plan (RAP):

- April 2007 Received approval from the Regional Water Quality Control Board (RWQCB) to implement the Second Addendum
- May 2007 Performed dual-phase extraction pilot test
- May-July 2007 Incorporated four existing soil vapor extraction (SVE) wells into the total fluids extraction (TFE) system
- June 2007 Installed seven new remediation wells
- June-July 2007 Connected the new remediation wells to SVE system
- August-December 2007 Performed upgrades to groundwater treatment system to increase treatment capacity for the anticipated increase in flow from the new wells
- December 2007 Incorporated seven new SVE wells and one existing SVE well into TFE system
- January 2008 Completed all startup of expanded remediation system
- April 2008 Replaced original air compressor (installed in 1995) with new air compressor.
 Currently two air compressors are operating south-central wells.

Mr. Osborn said that these activities are to help achieve the goal of completing cleanup within five years.

Remediation Operations Update

Shiow-Whei Chou displayed a map of the remediation systems and indicated KMEP's cleanup areas: the Westside Barrier System, the South Central area, and the Southeast area. She said that KMEP has 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.

Nearly 2 million gallons of groundwater were extracted during the first quarter 2008 including: 1,404,000 gallons from the South-Central Plume area; 267,000 gallons from the Southeastern 24-Inch Block Valve area; and 360,000 gallons from the West Side Barrier area. Total groundwater extracted since September 1995 includes: 28 million gallons from the South-Central Plume area; 8.5 million gallons from the Southeastern 24-Inch Block Valve area; and 26.9 million gallons from the West Side Barrier area. A total of 63.3 million gallons of groundwater have been extracted from all three areas, and 8,917 gallons of free product have been removed. The free product amount was unchanged from last period. They are extracting a lot more

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groundwater than free product. Free product recovery has been at asymptotic levels over the last several years.

Ms. Chou said that the groundwater/product extraction system operated continuously during the first quarter of 2008 with the following exceptions:

- The system was shut down for approximately 13 days for Southern California Edison (SCE) activities.
- The system was shut down for system maintenance (approximately 13 days) for carbon changeout, repair of the transfer pump, and reconfiguration of the effluent water storage tanks.
- The system was shut down for approximately two days pending further evaluation of a suspect result indicating the reported presence of benzene in a sample of treated groundwater (effluent). Two confirmation samples were both non-detect.

The system operated for 65 percent of the time during the quarter, slightly less than last quarter. The system potentially could have operated for 83 percent of the time without the SCE-related shutdowns. Ms. Chou also showed a graph of the cumulative groundwater and product extracted. The graph shows a little bit of increase in product removal, and an increase in groundwater extracted from the South-Central area.

Ms. Chou next said that the Soil Vapor Extraction 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. During the first quarter 2008, approximately 266 gallons of fuel were removed and from soil and destroyed by catalytic oxidation. Approximately 452,600 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 59,630 hours since September 1995. It operated continuously during first quarter of 2008 with a few exceptions:

- The SVE system was shut down for approximately 14 days for troubleshooting and repairs of the oxidizer's combustion system.
- The SVE system was shut down by SCE for approximately 13 days for maintenance of SCE facilities.

The system operated for 62 percent of the time during the quarter. The system potentially could have operated for 83 percent of the time without the SCE-related shutdowns. Ms. Chou then showed a graph of the cumulative fuel removed by vapor extraction. The past six months, after the upgrades, have shown a rebound in mass removed by SVE.

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 (this could include turning the pumps on or off, opening or closing wells to SVE, or adjusting the pump intake depths).

Planned Remedial Activities

Ms. Chou said that KMEP will continue weekly inspections on the remediation system. They will continue data collection for monitoring and evaluation of the remediation systems. They will continue to make adjustments to remediation wells to optimize remediation based on what they see in the monitoring results (turning the pumps on or off, opening or closing wells to SVE, or adjusting the pump intake depths). They will also continue the evaluation of southeastern area.

First Ouarter 2008 Sentry Monitoring Event

Ms. Chou said that the first quarter 2008 Sentry Monitoring Event was performed in February. Twenty wells were sampled, including 4 Exposition wells. Groundwater elevations generally decreased in the uppermost aquifer and increased slightly in the Exposition aquifer beneath the site since November 2007. No volatile

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organic compounds (VOCs) were detected in Exposition wells. In the southern off-site area, VOCs were not detected in wells GMW-O-1, GMW-O-2, GMW-O-3. In the Southeastern Block Valve area, free product was not detected in GMW-36 where it was detected in November 2007. 1,2-Dichloroethane (1,2-DCA) was not detected in wells sampled in the southeastern area. Wells GMW-1, MW-SF-1, MW-SF-4, and PZ-10 near the Intermediate 24-Inch Block Valve area were monitored voluntarily by KMEP during the Sentry Event; no free product was detected. In western off-site area, 1,2-DCA and methyl tert butyl ether (MTBE) were detected in only one well (WCW-7) at concentrations below Risk-based Corrective Action (RBCA) levels.

Additional Assessments

Ms. Chou reviewed the status of the two work plans for the Southeastern 24-Inch Block Valve Area. She said that in a letter dated December 3, 2007, the RWQCB requested two work plans for the off-site 24-Inch Block Valve area. The first work plan, for soil gas sampling and surface emission testing, was submitted to the RWQCB on December 14, 2007. The second work plan, for additional subsurface assessment, was submitted to the RWQCB on January 25, 2008. The RWQCB granted verbal approval of these work plans on April 22, 2008. Ms. Chou said that the objectives are to:

- Further assess the presence of volatile fuel constituents in soil gas. Depending on the soil gas results, they may evaluate potential surface emissions of volatile fuel constituents
- Delineate the lateral extent of dissolved fuel constituents
- Delineate the vertical extent of dissolved fuel constituents
- Confirm the depth and presence of the Bellflower Aguitard

Ms. Chou said that in general there were no chemicals detected in the main park area. There were some detections near the southeastern area. Ms. McIntosh said that the detections were not in the soil; they were primarily in the groundwater. Ms. McIntosh said that the treatment systems were revamped to cover that area. Mr. Osborn said that they have been working on that area for some time.

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

General Site Activities

Redwan Hassan said that Parsons submitted the fourth quarter 2007 Groundwater Discharge Monitoring Report for NPDES Permit on April 14. They also completed the Groundwater Monitoring Report, which was finalized and submitted. They conducted absorbent sock monitoring and change out for those wells that contained low levels of free product (less than one foot). Sections of PVC pipe and connections were repaired. The Air Quality Management District (AQMD) came out and inspected the thermal oxidizer (TO) system. Parsons also conducted groundwater treatment system optimization as per the revised RAP and five-year closure goal. Optimization activities included: streamlining the PLC design; reconfiguration of the equipment and system (a result of the thermal oxidizer and increased capacity); purchase of two new filtration units (brand named MYCELX); and purchase of a second activated carbon vessel for the groundwater system, due to the pressure increase in the new large diameter wells.

Thermal Oxidizer System Evaluation

Mr. Hassan said that the TO equipment was shut off on February 25, 2008, for the following reasons:

- To allow the site to reach equilibrium (to recharge) and then conduct respiration testing to assess site conditions and test for rebound of contaminants in the vadose zone. They will collect rebound data to see how well the system has been working.
- Time for a change in remediation technology. The TO is 10 years old and is using a lot of natural gas, which is costing a lot of money and not removing as many hydrocarbons. They plan to shut down the natural gas and use a carbon system instead.

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• Equipment may be past its shelf life in order to meet permit discharge requirements.

Once testing has been completed, an evaluation will be conducted to establish the optimal treatment technology for vapors. Then they may focus on bioventing rather than vapor extraction.

Remediation System Upgrade Summary

Mr. Hassan said that they have conducted the following remediation system upgrades:

- Installed transmitter and receivers for remote control of wells GW-14 and GW-15 (two of the new large diameter wells)
- Installed level sensors for the sump and surge tank (the surge tank is the blue tank that receives water from the wells)
- Air stripper cap was replaced
- Installed new PLC panel
- Changed out the 1.5 HP pump for the 3 HP pump
- Installed flow check valves at carbon vessels and flow switch at filters
- Installed 2 new filtration units
- Installed new carbon vessel

Mr. Hassan also showed pictures of the new PLC panel, new MYCELX filtration units, and the new carbon vessel. He said that the new carbon vessel was to treat arsenic. The arsenic is naturally occurring, but they need the new vessel to comply with discharge permits.

Remediation System Performance Update

Mr. Hassan said that from April 1996 through March 2008, approximately 428,707 gallons of total hydrocarbon mass were removed. This includes approximately 215,860 gallons recycled and destroyed and an estimated 212,850 gallons of hydrocarbons destroyed due to enhanced biodegradation. Approximately 42.2 million gallons of groundwater were treated. He said that the groundwater number will increase due to the new large diameter wells. A detailed breakdown of the 215,860 gallons that has been recycled and destroyed includes:

- 55,560 gallons of free product recovered and recycled (including absorbent sock recovery)
- 1,400 gallons of dissolved-phase hydrocarbons recovered and treated through onsite treatment system (groundwater extraction that is going through the carbon system)
- 158,900 gallons of volatile hydrocarbons recovered through SVE and treated through onsite treatment system

Mr. Hassan next displayed a graph showing free product, free product and SVE, and the total mass removal including biosparging. The free product removal has been stable since about the year 2000; there is not much left to recover. They are now just removing residual product using the absorbent socks. Tracy Winkler asked about an apparent decrease in the graph. Mr. Hassan said they would review it and get back to her. Ms. McIntosh requested that Mr. Hassan send an email of the results from the last quarter.

1st Quarter 2008 Sentry Groundwater Monitoring Results

Mr. Hassan said that 55 wells were gauged during the first quarter 2008 Sentry Groundwater Monitoring Event. Nine wells were sampled: EXP-3, GMW-47, GMW-57, GMW-58, GMW-59, GMW-60, GMW-61, GMW-62, and MW-14. The lateral extent and concentrations of the dissolved-phase plumes were similar to those detected during the previous quarter. He said that he wanted to emphasize that TPH (total petroleum hydrocarbons) was not detected in the Exposition Aquifer (EXP-3). This well had TPH last time, which they

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thought was an anomaly. The non-detection this time confirms that it was probably an anomaly. Mr. Hassan next showed a chart of the results. He said most of the high concentrations were found in the eastern wells. MTBE was mainly non-detect. Well GMW-62 had high concentrations. They will check to see if concentrations decrease next time with the large diameter wells.

Ms. McIntosh said she received the sentry results from Geomatrix and Parsons. She said she would like a quick report at the July meeting from Geomatrix and Parsons on wells GMW 57 through 62, in the Interim Block Valve area. She would like to see results from first quarter 2006 to the next event, to show where we are at. Ms. McIntosh also asked that they will bring a table for wells GMW-O-4 and MW-SF-1 and MW-SF-4 for first quarter 2006 to first or second quarter 2008. By July 2008 we should see improvements. Mr. Osborn said that that they will also include hydrographs, since they are pulling so much water. Mr. Hassan said Parsons would also.

Planned Activities

Mr. Hassan said that the semiannual groundwater monitoring event was conducted last week (April 14-19). Weed abatement began on April 22. Ms. McIntosh requested that the access road be weeded also. Mr. Hassan said that the groundwater treatment system start-up evaluation and testing began April 21, and it is now up and running. The Eastern boundary aquifer testing and monitoring is planned. This is from the workplan that addresses the assessment of groundwater in the park. They will use the wells closest to the park, which will be less intrusive to the public. They also plan vapor respiration testing and evaluation. This is when every six months they check the effectiveness of treating vapors recovered from the wells. They will shut down the system to allow for rebound. Then they take vapor samples to see if there is any decrease. If there is, then they are on the right track. If there is little decrease, then they would need to look at other technologies. Mr. Hassan also said that additional groundwater investigation at Holifield Park will include additional monitoring wells along the school (pending regulatory approval, which was received verbally today from RWOCB).

5. Set Date and Agenda for Next Meeting

The next quarterly RAB meeting will be held on **Thursday, July 31, 2008, at 6:30 p.m.** in the Norwalk Arts & Sports Complex. The agenda is to include data from wells GMW 57 through 62, MW-SF-1, MW-SF-4, and GMW-O-14; remediation updates; and KMEP's Semiannual Groundwater Monitoring Update.

6. Public Comment Period

Margarita Rios asked what types of options were there for development of the site. Ms. McIntosh said that the City has a development in mind, and they have zone the site tightly to match it. It is mainly light industrial and commercial, such as office buildings. At the corner of Excelsior and Norwalk, there may be a strip mall, with possibly a grocery store or other shops. The City would like 10 acres near the park for expansion of the existing park. The winning bidder must adhere to the zoning. The developer would still be responsible for completion of the cleanup. The Air Force will not transfer the title to the developer until the site cleanup has been completed, and \$30 million worth of work is completed at March Air Reserve Base. Mr. Osborn said that KMEP's cleanup activities will continue regardless of the development.

Jose and Margarita Rios said that they live on Cheshire and asked about health risks. Ms. McIntosh said that they looked at that area a lot. A health risk assessment was conducted and samples were taken at several homes. Everything came up fine. There are plumes that have traveled off-site under homes, so they keep an eye on it with monitoring wells in the area.

Ms. McIntosh adjourned the meeting at 7:45 p.m.

ACTION ITEMS			
Item	Responsible Party	Due Date	
Email last quarter remediation numbers	Parsons	5/16/08	
Hydrocarbon Mass Removal Chart Update	Parsons	4/28/08	
Access Road weed abatement	KMEP	7/31/08	
Well data tables, first quarter 2006 to first or second quarter 2008, wells GMW 57 through 62, MW-SF-1, MW-SF-4, and GMW-O-14	KMEP & Parsons	7/31/08	
Next Quarterly RAB meeting	All	7/31/08	