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## Meeting Minutes

<b>Meeting Subject:</b> Former Norwalk Tank Farm Restoration Advisory Board (RAB) Semiannual Meeting	<b>Meeting Date:</b> <u>26 February 2015</u> <b>Meeting Time:</b> 4:00 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> E. Garcia M. McIntosh (Co-Chair, Meeting Chair) T. Winkler	<b><u>Other Members</u></b> S. Strum (DLA Energy) P. Cho (RWQCB) S. Defibaugh (KMEP) (Co-Chair) C. Emig (City of Cerritos) A. Figueroa (City of Norwalk) N. Irish (SGI)
<b><u>Other Attendees</u></b> D. Jablonski (CH2M HILL) M. Wuttig (CH2M HILL) K. Wall (SGI) M. Black (SGI) A. Czuba (SGI) P. Wu (SGI) D. Swensson (SGI) P. Ly (WRD) E. Ferguson (WRD) D. Haase (GSA) J. Mollenshott (GSA) B. Kraemer (USAF) M. Wilson (USAF) C. Hachworth (Resident)	<b><u>Acronyms:</u></b> 1,2-DCA..... 1,2-dichloroethane CO <sub>2</sub> ..... carbon dioxide COPCs ..... Contaminants of Potential Concern DFSP ..... Defense Fuel Support Point DLA Energy... Defense Logistics Agency-Energy (formerly DESC) GSA ..... U.S. General Services Administration KMEP ..... Kinder Morgan Energy Partners LNAPL..... light non-aqueous phase liquids MTBE ..... methyl tertiary-butyl ether NPDES..... National Pollutant Discharge Elimination System O <sub>2</sub> ..... oxygen ppm ..... parts per million RAB ..... Restoration Advisory Board RAP ..... remedial action plan RWQCB..... Regional Water Quality Control Board SCAQMD ..... South Coast Air Quality Management District SGI ..... The Source Group, Inc. SVE ..... soil vapor extraction TBA ..... tert-butyl alcohol TFE/GWE ..... total fluids extraction/groundwater extraction TPH ..... total petroleum hydrocarbons ug/L ..... micrograms per liter USAF ..... United States Air Force VOCs ..... volatile organic compounds WRD ..... Water Replenishment District of Southern California

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### **BACKGROUND**

Defense Logistics Agency - Energy (DLA Energy) and Kinder Morgan Energy Partners (KMEP) are conducting environmental cleanup activities at the area in and surrounding the former Defense Fuel Support Point (DFSP) Norwalk facility, formerly known as the Tank Farm, located at 15306 Norwalk Boulevard, Norwalk, California. The Restoration Advisory Board (RAB) is an advisory committee of local citizens and project members that review and comment on documents relating to the environmental cleanup. All RAB meetings are open to the public and are scheduled semiannually on the fourth Thursday at 4:00 p.m. in the months of February and August unless otherwise voted on by the RAB community membership.

### **1. Introduction** Mary Jane McIntosh, RAB Co-Chair, Meeting Chair

Mary Jane McIntosh, RAB Co-Chair, Meeting Chair, called the meeting to order at 4:15 p.m.

Ms. McIntosh asked for comments on the draft minutes from the August 28, 2014 RAB meeting. Ms. McIntosh made a motion for the minutes to be approved as written. Tracy Winkler seconded the motion. The minutes were approved without opposition.

Ms. McIntosh introduced Bob Kraemer, Deputy Chief Counsel at Real Estate Office for the Air Force, Jennifer Mollenshott of The United States General Services Administration (GSA) and David Haase of GSA. Ms. McIntosh also welcomed the residents in the audience.

Ms. McIntosh also announced her new email address as [MaryJane@ChurchillComposites.com](mailto:MaryJane@ChurchillComposites.com).

### **2. United States Air Force Update** Michael Wilson, USAF

Michael Wilson provided an update on the property conveyance schedule stating that the goal is to have the 15 acres (located adjacent to Holifield Park) conveyed to the City of Norwalk as a park parcel by August 2015. Mr. Wilson stated that GSA would facilitate the conveyance of the remaining 36 acres once the soil remediation closure is complete which will take approximately 18 months to two years (time subject to change).

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### 3. **DLA Energy Update** Neil Irish, The Source Group, Inc. and Ken Wall, The Source Group, Inc.

Neil Irish, SGI Project Manager for the DFSP Norwalk site introduced SGI staff and commended Paul Cho and the Regional Water Quality Control Board (RWQCB) for their work in providing permits and approvals required to commence remediation work. Mr. Irish stated that a lot of progress has been made to begin remediation; however permits from the South Coast Air Quality Management District permits are still pending despite applications being submitted in June 2014, receipt of application acknowledged in July 2014 and a draft permit provided in September 2014. Mr. Wilson of the USAF as well as Everett Bole of DLA Energy have been in communication with the SCAQMD to express the urgency of the project and pending permits.

Ms. McIntosh inquired if our State Assemblyman or State Senator has been contacted to assist with expediting the permit process. Mr. Wilson stated that a representative of Congresswoman Sanchez has been in contact with SCAQMD regarding the permits. Mr. Irish stated that SGI has been committed to responding to SCAQMD questions and concerns to ensure safety and compliance.

Ms. McIntosh stated that KMEP is also experiencing a delay in permitting with SCAQMD. Ms. McIntosh offered to reach out to whomever possible if so needed.

#### **Status of Remediation System Update**

Ken Wall, SGI Project Manager for the DFSP Norwalk site presented the Facilities Planning, Construction and Management Update on behalf of DLA Energy.

Mr. Wall provided a status update of the remediation system and provided information on groundwater remediation, soil vapor extraction (SVE) and light non-aqueous Phase Liquids (LNAPL) recovery.

#### **Soil Remediation – Site Wide**

Mr. Wall stated that bioremediation methods would be used to remediate the upper 10 feet of soil. The scope of work was expanded to increase the excavation depth to remediate deep soil contamination (>10 feet) and treat contaminated groundwater. Mr. Wall also stated that remediation plans were also expanded to include the treatment of shallow “oily sand” present near the former clarifier. The “oily sand” is approximately 6,000 tons of buried material with high hydrocarbon concentrations. Some trucks may be required during the remediation of the “oily sand” because of the possibility that some soil may not be amenable to onsite treatment.

Mr. Wall discussed the status of pre-field activities stating that all required plans have been completed and permits acquired (aside from the pending SCAQMD permit). Surveying and utility clearance has been completed. Mr. Wall stated that in preparation of excavation activities, 28 groundwater monitoring wells were removed as discussed in the *Well Removal Completion Report* submitted on February 2, 2015, to the RWQCB. Groundwater monitoring will continue using remaining wells onsite.

Mr. Wall discussed additional site preparation stating that six treatment rows have been prepared in the Powerine Basin (central basin on north side of property where DLA Energy’s existing remediation treatment system is located). The Powerine Basin is designated as Treatment Cell #1. The bio-enhanced (F4) Earth Cleaning Machine (ECM) and mixing trailer have been field tested with clean soil and surfactant only.

Mr. Wall presented a figure depicting soil excavation locations and excavation depth intervals stating that remediation will begin in the northeast corner of the site focusing on depth intervals of 0-10 feet; thereafter, deeper excavations will commence (provided resources and 0-10 feet excavations go according to plan). Excavation of soil within the 0-10 feet interval is what is required for No Further Action to be granted.

Mr. Wall stated that field measurement of potential fugitive air emissions will be conducted to provide an

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additional factor of safety as requested by the SCAQMD to obtain real-time empirical data as a quality assurance step to ensure compliance and safety.

Ms. McIntosh requested that Mr. Wall provide more information about the surfactant to be used to clean the soil. Mr. Wall stated that the surfactant is similar to household laundry detergent and that it enhances the ability to wet the soil and provides a food source for the bacteria to enhance their ability to consume the hydrocarbons in the soil. The surfactant is alcohol based with no bi-products.

Mr. Wall showed a brief video of ECM operations.

Ms. Winkler asked if we have a lot of rain does this process work in a muddy environment. Mr. Wall responded by stating that this process will work in a wet muddy environment.

### **Work Plan for Assessment at GMW-62 Updates**

Mr. Wall discussed the assessment of the floating product plume around offsite well GMW-62 located in the northwest portion of Holifield Park adjacent to the site's eastern property fence.

Mr. Wall stated that the work plan to fully assess the extent of the floating product plume was submitted to the RWQCB for review and approval and includes the installation of three additional wells on Holifield Park. The assessment objectives are to determine distribution of floating product and evaluate mitigation pathways as well as expand floating product recovery efforts.

Mr. Wall stated that physical parameters will be measured specifically for pore fluid saturation and product mobility during bench scale testing.

Mr. Wall also discussed an additional approach (not requested by RWQCB).

Ms. McIntosh expressed concern regarding GMW-62 activities and timeline.

Mr. Wall responded that SGI is working closely with Mr. Cho of the RWQCB to finalize the Work Plan for assessment at GMW-62 and should have more information regarding the assessment of GMW-62 to present during the next RAB meeting in August 2015.

Ms. McIntosh inquired about the condition of the soil in area of GMW-62.

Mr. Irish responded first by stating that assessment work of GMW-62 is pending approval of the Work Plan submitted to Mr. Cho of the RWQCB. Funding is in place to drill the additional wells and begin the assessment; however work cannot commence until Work Plan is approved. Mr. Irish also stated that further assessments will be conducted along eastern portion of the facility near KMED's pipeline, and within the park area to determine where there is contaminated soil. Contaminated soil only exists at the groundwater level and deeper. It appears that the source that existed at one time is gone and potentially the source material that caused the groundwater to be contaminated could have been excavated and not reported. Remediation of the soil in the area of GMW-62 is not required.

Eugene Garcia, RAB Community Member, asked why a Work Plan is necessary. Mr. Cho responded by stating that the site remediation and assessment is regulated by the RWQCB and work plan preparation and approval is required.

### **Soil Gas Survey**

Mr. Wall also stated that on February 25-26, 2015, SGI conducted a soil gas survey along the eastern perimeter and the northern edge of the property to obtain a current baseline of soil gas conditions.

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Preliminary results were mostly non-detect.

#### 4. KMEP Update Mark Wuttig, CH2M HILL

##### Remediation Operations Update

Mark Wuttig provided an update on KMEP's remediation operations, annual soil vapor monitoring, and planned activities.

Mr. Wuttig stated that overall objectives are to remove contaminated mass and contain the contamination. Mr. Wuttig stated that depth to groundwater is approximately 25 feet. KMEP has conducted extensive soil sampling and essentially, soil from ground surface to close to water table is clean and below any human health based risk action levels. KMEP's focus is primarily to remediate smeared product and some floating product that is on the water table at approximately 25 feet below ground surface. To accomplish these objectives KMEP maintains an SVE system, a groundwater extraction (GWE) system and a total fluids extraction (TFE) system. These remediation systems are located in the south-central and southeast area, which provide very good coverage across the contaminant plume. Mr. Wuttig mentioned the former remediation system referred to as "The West Side Barrier" was discontinued in August of 2008 based on low contaminant concentrations that no longer pose a risk.

Mr. Wuttig also discussed the treatment and discharge of the systems.

Mr. Wuttig discussed operation and maintenance activities and summarized KMEP's SVE operations. Since 1995, approximately 485,000 gallons (3.2 million pounds) have been treated. Mr. Wuttig displayed a graph depicting the cumulative fuel removed by vapor extraction to date.

Regarding KMEP's TFE/GWE system, Mr. Wuttig stated that groundwater extracted from the south-central and southeast areas is 64 million gallons and from the West Side Barrier is 26.9 million gallons since 1995.

Mr. Wuttig said that floating product recovery has increased as related to the decline of the water table elevation to historical lows, which has allowed some of the trapped product within the smear zone to be released and float out onto the groundwater table for recovery. Former wells with zero to minimal product now contain several feet of product that has been recovered using hand bailing or a vacuum truck. A total of 11,225 gallons has been recovered since 1995. Mr. Wuttig displayed a graph of floating product and groundwater recovered over time.

Mr. Wuttig summarized reasons for SVE system downtime and discussed preventative maintenance activities.

Mr. Wuttig discussed remediation system status which included the shut down of the SVE system to repair a leaky heat exchanger (completed in December 2014) and modification of the 1998 SCAQMD permit to include the latest groundwater treatment system and SVE modifications and the new biosparge system. An expedited review process was requested; however modified permit approval is pending. The SVE system has been down since late July 2014 to facilitate processing of the AQMD permit.

Mr. Wuttig presented a hydrograph showing the historical groundwater elevations in the upper aquifer and the underlying exposition aquifer from 1993 to present, which depicts the groundwater table at a historical low which has exposed floating product trapped in the smear zone.

##### Pilot Biosparge System

Mr. Wuttig stated that the Construction and Pilot Test Work Plan was approved by the RWQCB on February 26, 2014. Detailed planning and implementation have been underway and pilot well construction was completed in August 2014. To supplement monitoring and performance, six triple nested soil vapor probes were installed in September 2014. Mr. Wuttig stated that pilot testing would occur for approximately 1 year and will commence in the 2<sup>nd</sup> or 3<sup>rd</sup> quarter of 2015. Monitoring for volatile organic compounds (VOCs), carbon dioxide (CO<sub>2</sub>), oxygen (O<sub>2</sub>), methane and electron acceptor chemistry will be conducted.

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Additional biosparge lines may be installed to cover entire remediation area dependent on results of the pilot test.

Mr. Wuttig provided detailed explanation of the biosparge well layout and conceptual design.

Mr. Irish inquired as to how the presence of floating product may affect the performance of the biosparge well.

Mr. Wuttig responded by stating that based on field testing conducted and based on experience at multiple LNAPL sites he does not believe that LNAPL will be mobile or leave the containment zone with continued operation of the TFE system.

Mr. Wuttig discussed the annual soil vapor monitoring that was conducted in October 2014 and presented a figure depicting soil vapor monitoring probe locations, remediation well locations and the location of the biosparge well. Samples were analyzed using a mobile lab and a fixed lab. Samples analyzed in the mobile lab detected contaminants of potential concern (COPCs) in deeper probes (22-foot depth) at concentrations greater than human health screening levels. All COPCs shallower than 15.5 feet were non-detect and below human health screening levels (except total petroleum hydrocarbons as gasoline [TPHg] detected in SVM-16 at 15.5 feet). Samples analyzed in the fixed lab had detections of COPCs in all probes were generally below analytical reporting limits and all detections were below the human health screening levels.

Mr. Wuttig presented a slide with fixed gas profiles demonstrating that hydrocarbons are biodegrading under aerobic conditions at depths shallower than 15 feet and under anaerobic conditions at deeper depths near the smear zone.

### **Planned Activities**

Mr. Wuttig stated that planned remediation activities include continuing TFE in south-central and southeastern areas, resuming SVE once SCAQMD permit is issued, installing new oil water separator to GWTS, completing electrical and conveyance work associated with biosparge system, beginning operation of biosparge well, collecting monthly groundwater and soil vapor samples as part of pilot testing program and submitting monthly reports to RAB presenting operational and analytical data from pilot testing activities.

Mr. Cho inquired about the water level increase since 2005. Mr. Cho wanted to know if this is normal or if there is something specifically occurring in the Norwalk area. Phuong Ly of the WRD responded by stating that water levels are dropping in the central basin and the data presented is not surprising. Ms. Ly stated the WRD produces annual reports that include monitoring well data for wells screen in specific aquifers that can be used for comparison.

Mr. Wuttig stated that the WRD monitoring wells are more similar to the Exposition wells and the perched unit (uppermost aquifer) is more localized and could probably not be specifically correlated with WRD wells. Ms. Ly agreed stating that WRD does not have any wells screened in the uppermost aquifer.

Mr. Cho asked if there is any data before 1996. Mr. Wuttig responded that some data may exist, but the remediation system operation began in 1995 and that is why data collection began around that time.

### **5. Second Semiannual 2014 Groundwater Monitoring Report** Daniel Swensson, SGI

Mr. Swensson summarized the Second Semiannual 2014 Groundwater Monitoring Report for sampling conducted between October 27 and November 3, 2014. Holifield Park wells were sampled on December 17, 2014, after the access agreement with the City of Norwalk was approved. Well gauging and groundwater sample collection was conducted by The Source Group, Inc., and Blaine Tech. A total of 166 wells were gauged (treatment systems were offline). Groundwater samples were collected from 108 wells using low-flow methodology (including duplicate and split samples, 125 groundwater samples were analyzed).

Mr. Swensson displayed and discussed groundwater elevation maps for the uppermost groundwater zone and

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the Exposition Aquifer.

Mr. Swensson stated that floating product was measured in 36 of the 166 wells gauged and measured thicknesses range from 0.01 feet to 5.63 feet.

Mr. Swensson discussed the sampling of the Exposition Aquifer wells and indicated that all analytical results were non detect, except for methyl tertiary-butyl ether (MTBE), which was detected at EXP-1 in the Blaine Tech sample at a concentration of 1.3 micrograms per liter (ug/L) (<2.0 ug/L in the sample collected by SGI); 1,2-dichloroethane (1,2-DCA) detected at EXP-3 in the Blaine Tech sample at a concentration of 0.52 ug/L (<5.0 ug/L in the sample collected by SGI); and TPH as diesel (TPHd) detected at EXP-4 in the Blaine Tech sample at a concentration of 63 ug/L (first time TPHd reported in EXP-4). This concentration is just above the 50 ug/L detection limit and will be further evaluated if detected during the next sampling event.

Ms. McIntosh asked whether it was possible that, due to the location of EXP-4, the detection of TPH as diesel could be from activities not related to the Tank Farm. Mr. Swensson stated that this is unlikely (EXP-4 is upgradient from the site), and the presence of TPH will be confirmed during the next sampling event in April 2015.

Mr. Swensson discussed the sampling of the uppermost aquifer wells stating that, in most areas, the lateral extents of TPH, benzene, 1,2-DCA, MTBE, and tert-butyl alcohol (TBA) in groundwater remain similar to those interpreted during previous monitoring events.

Mr. Swensson, who had been involved in the DFSP Norwalk project in the 1990s, discussed changes/improvements in environmental conditions since the late 1990s (groundwater gradients in the uppermost aquifer are now generally toward the site, as compared with a northwestern gradient in ~1997; occurrence of floating product and measured product thicknesses have declined substantially; dissolved TPH extended further off site to the northwest in 1997 [up to 300 ug/L TPH in WCW-4 in 1997 (WCW-4 was non-detect for TPH in October 2014)]; benzene is not as widespread and dissolved benzene concentrations have declined substantially; 1,2-DCA is not as widespread and dissolved 1,2-DCA concentrations are much, much lower [220 ug/L 1,2-DCA in western off-site well WCW-3 in 1997, compared with 0.84 ug/L 1,2-DCA in WCW-3 in October 2014]).

### **6. Regulatory Agency Update** Paul Cho, Regional Water Quality Control Board

Paul Cho, the Regional Water Quality Control Board (RWQCB) Project Manager for the Norwalk site, stated that groundwater and deep soil will be discussed in the next RAB meeting and at that time the Work Plan for GMW-62 will be discussed further as results will be used as a performance matrix for site closure evaluation.

Ms. Winkler ask if August 2015 is a realistic timeframe to receive closure on 15 acres planned for conveyance as park land?

Mr. Cho stated that remediation completion and a closure letter from RWQCB may be completed by August 2015.

### **7. Set Date and Agenda for Next Meeting**

The next semiannual RAB meetings will be held on Thursday, August 27, 2015, at 4:00 p.m. in the Norwalk Arts & Sports Complex. Agenda items to be included are pilot testing and remediation system updates.

### **8. Public Comment Period**

Ms. McIntosh made a motion to adjourn the meeting. Meeting adjourned at 6:11 p.m.

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<b>ACTION ITEMS</b>		
<b>Item</b>	<b>Responsible Party</b>	<b>Due Date</b>
Next RAB meeting	All	08/27/15