# MEETING MINUTES

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| **Meeting Subject**:<br>Former Norwalk Tank Farm<br>Restoration Advisory Board (RAB)<br>Semiannual Meeting | **Meeting Date**: **February 28, 2019**<br>**Meeting Time**: 4:00 p.m.<br>**Meeting Place**: Norwalk Arts & Sports Complex |

**RAB, PROJECT TEAM, AND OTHER ATTENDEES**

**RAB Community Members**
M. McIntosh (Co-Chair, Meeting Chair) Via Phone
T. Winkler

**Other Members**
P. Cho (RWQCB)
S. Defibaugh (KMEP) (Co-Chair)
C. Devier-Heeney (DF-FEE Energy)
M. Garcia (City of Norwalk)
N. Irish (SG/Apex)

**Other Attendees**
D. Wincele (DF FEE Energy Contractor) Via Phone
D. Swensson (SGI/Apex)
E. Davis (Jacobs)
V. Carino (Jacobs)
C. Gross (GSA)
S. Duran (City of Norwalk)
S. Martin (KMEP)
P. Parmentier (SGI/Apex)
L. Graves (SGI/Apex)
Y. Gallegos (SGI/Apex)
M. Taylor (Air Force)
M. Wilson (Air Force)
J. Gomez (City of Norwalk)
S. Perales (Shea Properties)
M. Escobar (Shea Properties)

**Acronyms:**
1,2-DCA..... 1,2-dichloroethane
bgs..... below ground surface
BLM ..... Bureau of Land Management
$CO_2$ ..... carbon dioxide
CFM……cubic feet per minute
DLA..... Defense Logistics Agency
DFSP ..... Defense Fuel Support Point
DF-FEE..... Defense Logistics Agency-Energy
DTSC.....Department of Toxic Substances Control
gpm……..gallons per minute
GSA..... U.S. General Services Administration
GWTS……..Groundwater Treatment System
HHRA.....Human Health Risk Assessment
KMEP..... Kinder Morgan Energy Partners
lbs…….pounds
LNAPL ..... light non-aqueous phase liquids
MTBE..... methyl tertiary-butyl ether
NFA ..... No Further Action
$O_2$..... oxygen
PCE ..... tetrachloroethylene
ppb ..... parts per billion
RAB ..... Restoration Advisory Board
RSLs.....Risk Screening Levels
RTO.....Regenerative Thermal Oxidizer
RWQCB..... Regional Water Quality Control Board
SCFM……..Standard Cubic Feet per Minute
SFPP.....Santa Fe Pacific Pipeline
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**

DF-FEE Installation Operations Energy (DF-FEE) Restoration Branch of the Defense Logistics Agency (DLA) and Kinder Morgan Energy Partners (KMEP) are conducting environmental cleanup activities 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.

**INTRODUCTION Steve Defibaugh, RAB Co-Chair, Meeting Chair**

Steve Defibaugh, RAB Co-Chair, Meeting Chair, called the meeting to order at 4:06 p.m.
Minutes from the February 22, 2018 RAB meeting approved.

Attendees introduced themselves.

**GSA Update** Chelsey Gross, GSA

General Services Administration, GSA is waiting for the No Further Action (NFA) from the Regional Water Quality Control Board (RWQCB) on the remaining 36 acres. Once we have the final report, it will be formally accepted, and we can start the disposal process. Federal screening, which is a 30-day screening period for other federal agencies. The 30-day screening.disposal process of government property gives federal agencies opportunity to bid first on the property, which does not often happen. After the 30-days, it will be offered to other groups, which can take up to 60-90-days. If there areno offers the property will go to public auction.

- The City of Norwalk expressed interest in the property.
- M. McIntosh expressed concern that Norwalk is not zoned for homeless shelters, but administrative office would be excepted.

**DLA Update** Neil Irish, SGI/Apex

**Soil Remediation Project Progress**

Mr. Irish gave a briefing that the Eastern acres are done, except for deep soil and groundwater. We are still in process of receiving the NFA for shallow soil from the RWQCB. Pursuant to that, SGI submitted a risk assessment for and closure documents for the soil clean up. The RWQCB in returned submitted the risk assessment to their risk assessment evaluation department, who have changed the way they evaluate the soil gas data and the levels of acceptability. As a result, the calculations are different from the approval of the previous 15 acres. What we have calculated as non-cancer and cancer bench marks have been met, but their method has changed as they are now using residential bench marks since the property is adjacent to residential property. Calculations are being evaluated on the attenuation factor - dilution factor. Response to comments should be back to the RWQCB in a week. A few scattered points are an issue, but they are not too far above their threshold.

We have pulled 80 million gallons of groundwater from the ground, which is being treated and placed back into the ocean, and we have continued to operate the SVE system. With that system comes recovering a lot of material from the vapor phase, almost 3 million pound of hydrocarbon being removed to date. LNAPL recovery was two thousand gallons from LNAPL floating on water. We have noticed, going on for the last 6 months a falling water table, but not exactly falling fuel levels. This was most likely from the accumulation of fuel leaked from a former tank. As a result, we decided to install more recovery wells in this area.

**Status of Remediation System**

A new thermal oxidizer has been installed at the site and the natural gas supply has also been installed, with startup to begin next week. We have continued with the vapor extraction with the carbon vapor treatment method. With the new 3000 CFM unit, this will have a higher capacity to extract more carbon compounds from the ground. We are sensitive to the neighborhood as to the noise this system puts out, so we will continue to monitor the noise level since the unit is near Excelsior.

We had installed four horizontal vapor extraction wells, but one of them has collapsed as there is no flow. We have a cost estimate waiting for funding to replace the horizontal well. 65 biosparge wells were installed, the objective is to make the plume under the tank farm smaller. We will be bringing this system back online to allow oxygen and the natural accruing bacteria to consume the jet fuel. Our focus is to clean up the deep soil and groundwater.

Issues of concern

* Dust control: We will continue to monitor the dust at the site, using a water truck or a binding agent that is non-hazard to spray on the ground.
* Natural gas line is provided to the site just like it was provided to a residential home. There will be testing to make sure there are no leaks.
* Closure sampling for the top ten feet continues to be at low levels of the threshold. We will continue to treat the contaminants at the source in the deep area, which will in turn treat the shallow soil.
* Once the site is sold, who will pay for the cleanup. DLA will continue to pay for the cleanup.

**Q&A – SGI/Apex DLA Update**

Q: Will the natural gas be in a tank or pipe, can there be a potential leak? (T. Winkler)

A: The natural gas line onsite is just like a gas line that runsinto a residential home. If there was a leak you would smell it, not see it since it is an invisible gas. (N. Irish)

Q: Has the response to comments been prepared for OEHHA, if so when will you submit this document? (M. Escobar)

A: DLA reviewed on 2/27/2019, and their toxicologist, made comments to strengthen the document. SGI will have the final document to P. Cho within the next two weeks. (N. Irish)

Q: Will there be ongoing monitoring of the shallow soil even though the top 10 feet has received closure? (M. Escobar)

A: SGI has cleaned up 12-13 feet of shallow soil, we will continue to treat at vapor extraction points at the source. (N. Irish)

Q: Regarding expansion of the remedial system and sparge wells--Was this to speed up the cleanup process or was this to attack a new source? (M. Escobar)

A: DLA is committed to cleaning up this site, with major investing into cleaning up the shallow soil to allow the land transfer. (N. Irish)

Q: Who will pay for the remediation after transfer? (T. Winkler)

A: DLA will continue the remediation. (D. Wincele)

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**Second Semiannual 2018 Groundwater Monitoring**. Daniel Swensson, SGI/Apex

Daniel Swensson provided summary of the 2018 second semi-annual Groundwater Monitoring Report. Groundwater monitoring event took place November 5 – 15, 2018. Well gauging and groundwater sample collection was conducted by The Source Group, Blaine Tech, and SFPP. 181 wells were gauged (treatment systems were off line). 134 groundwater samples were collected from 115 wells using low-flow methodology (including duplicate, split, and confirmation samples)

Depth to Groundwater ranged from 29.15 to 41.21 feet below top of well casings. Elevations dropped an average of 0.41 foot since the April 2018 monitoring event. The groundwater surface was generally characterized by a groundwater depression in the south-central area with gradients converging toward this depression. Depth to Groundwater ranged from 55.61 to 62.95 feet below top of well casings. Elevations dropped an average of 1.70 foot since the April 2018 monitoring event.

The groundwater gradient beneath the site was generally flat with gradients converging toward the Site. Floating product was measured or observed in 32 of the 181 wells gauged during this monitoring event. Since April 2018, measured product thicknesses increased in 17 wells and decreased in 16 wells. Product was observed in four areas of the site: North-Central Area: Floating product was measured in 22 wells ranging from 0.49 to 4.80 feet, Eastern Area: Floating product was present in two wells (0.02 foot in GMW-58 and 0.02 foot in GMW-68), South-Central Area: Floating product was measured in seven wells ranging from 0.02 to 0.44 foot, and Southeastern Area: Floating product was measured in one well (0.13 foot in GMW-O-18).

Overall, results were similar to previous sampling events. TPH as Gasoline were reported in 24 of the 115 sampled wells (maximum: 11,000 µg/L in GMW-O-15). TPH as Diesel were reported in 53 of the 115 sampled wells (maximum: 8,200 µg/L in MW-SF-6).

- Benzene was reported in 24 of the 115 sampled wells (maximum: 5,100 µg/L in GMW-O-14).
- 1,2-DCA was reported in 12 of the 115 sampled wells (maximum: 5.0 µg/L in WCW-7).
- MTBE was reported in 24 of the 115 sampled wells (maximum: 650 µg/L in GMW-O-15).
- TBA was reported in 16 of the 115 sampled wells (maximum: 67,000 µg/L in PZ-5).
- Split samples were collected from EXP-1, EXP-2, and EXP-3 by both The Source Group and Blaine Tech.

Samples were collected from EXP-4 and EXP-5 by Blaine Tech.

- 100 µg/L TPH as diesel were reported in one sample collected from EXP-1, but was not detected (<50 µg/L) in the two duplicate samples from EXP-1.

- 0.52 µg/L MTBE were reported in one sample collected from EXP-2, but was not detected (<0.50 and <1.0 µg/L) in the two duplicate samples from EXP-2.

Samples from EXP-3, EXP-4, and EXP-5 were non-detect for all analytes.

**Q&A – SGI/Apex Groundwater Sampling & Monitoring**

Q: Of the 181 wells gauged, how many wells are onsite? (M. Escobar)

A: Approximately 140 onsite wells. (D. Swensson)

Q: How many groundwater extraction wells are onsite? (M. Escobar)

A: DLA operated 46 extraction wells (N. Irish) *Kinder Morgan operates ~10 extraction wells onsite, with anticipation to bring 1-2 wells online shortly. (E. Davis)

Q: At what gpm are the extraction wells running? (M. Escobar)

A: Extraction wells are running at 10 gpm, with few wells online. (P. Parmentier)

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**Kinder Morgan Update** Eric Davis, Jacobs

Eric Davis provided an update on Kinder Morgan Energy Partners (KMEP)'s remediation systems operation, completed remediation activities, and plan forward of the remediation activities.

**Remediation Systems Operations Summary**

SVE and biosparge was shut down July 6-12, 2018 due to a fire adjacent to the gas line along Norwalk Boulevard. The system was restarted after gas line repairs were completed.

- 3Q2018 the biosparge was off from August 16-23, 2018 and September 1-4, 2018 for system cooling maintenance.
- 3Q2018 the GWTS was shut down on August 21, 2018, due to a high level in the transfer tank and restarted on August 23, 2018.
- Mass removed 2,482 gal (16,379 lbs), GWTS removal volume 1,021,192.
- 4Q2018 the SVE and biosparge was shut down on October 15, 2018, due to a high combustion temperature on the RTO. The system was restarted on October 16, 2018.
- 4Q2018 SVE, biosparge, and GWTS was shut down from October 22 to November 15, 2018 to facilitate gauging and sampling activities for the second semiannual groundwater and the annual soil vapor monitoring event.
- Mas removed 1,357 gal (8,958 lbs), GWTS removal volume 544,102 gal.
- GWTS was shut down on December 22 to December 31, 2018 due to a faulty motor of the air compressors that supply air for the pneumatic valves on the RTO.
- The 500-scfm biosparge system was shut down on October 15, 2018, to accommodate installation of the new 883-scfm biosparge system.
- Total mass removed for second semiannual reporting period 539,067 gal (3.6 million lbs), total GWTS removal volume 105.4 million gallons.

**Exposition Aquifer Update**

- 5 wells screened in Exposition Aquifer, only one with detections in the last 10 years
- EXP-1 below MCLs, no increasing trend.
- 6 of the last 7 results were non-detect.
- Return to semi-annual sampling frequency.

**New Biosparge Compressor (175HP)**

- Compressor upgraded to operate both the onsite south-central and southeastern biosparge well.
- Installation was completed in 4Q 2018.
- Testing in Q1 2019.
- Compressor will be activated in Q2 2019.

**LNAPL Mobility Evaluation – Conceptual Site Model Updates**

- A comparative follow-up LNAPL study in the South-Central area.
- Review of mass removal trends.
- Distribution of LNAPL prior to and following treatment.
- 4 replicate LIF borings (adjacent to 2011 borings).
- Undisturbed Soil Cores and soil analytical testing.

**Summary of LNAPL Phase Change and Saturation Reduction in South-Central Biosparge Area**

- LIF decreased to near non-detectable response at comparable locations and depths from 2011 to 2018.
- Photographs of soil cores also do not show petroleum hydrocarbons.
- TPH soil concentrations have decreased at almost all sample locations by at least 95%.
- There was an absence of measurable LNAPL in monitoring wells (within the treatment area) during second quarter 2018 groundwater monitoring compared to the 2011 investigation when measurable product was detected.

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**Q&A – Kinder Morgan**

Q: Will the biosparge continue after the land transfer and what kind of profile does the system have if above ground? (T. Winkler)

A: Yes, biosparge will continue after the land is transferred. The biosparge system is a compressor which is in a self-contained enclosure, located on the 36 acers, not on park property. (E. Davis)

Q: Biosparging when first introduced as new idea? Will this method be a success? (T. Winkler)

A: This concept has been around for a long time, it gives us a new take on directional drilling, allowing us to move the boreholes as needed to locate contaminate areas. This new take on biosparging could be a success. (E. Davis)

Q: Will there be additional or twice a year groundwater monitoring or supplemental monitoring? (M. McIntosh)

A: Soil vapor probes are monitored annually, Kinder Morgan will add additional probes, monitoring wells and flux meters the monitoring. A workplan is in the works. (E. Davis/ S. Defibaugh)

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

Mr. Paul Cho, the Regional Water Quality Control Board (RWQCC) Project Manager for the Norwalk site, stated that the eastern area 15-acre parcel was issued a conditional NFA in April 2018 waiting on the recording for land use restriction part to be recorded by the City. Waiting for toxicologist from the Office of Environmental Health Hazard Assessment to review Human Health Risk Assessment report for the 36 acres. The RWQCB will continue to review the technical soil reports of the shallow soil.

**Set Date and Agenda for Next Meeting**

The next semiannual RAB meetings will be held on Thursday, August 22, 2019, at 4:00 p.m. in the Hargitt Room at the Norwalk Arts & Sports Complex.

**Public Comment Period**

S. Defibaugh adjourned 5:43 pm.

**ACTION ITEMS**

| Item | Responsible Party | Due Date |
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| Reserve August 22, 2019 RAB Meeting in Hargitt Room | Michael Garcia / Lisa Graves | June 2019 |