

MEETING MINUTES

Meeting Subject:
Former Norwalk Tank Farm
Restoration Advisory Board (RAB)
Semiannual Meeting

Meeting Date: February 22, 2018
Meeting Time: 4:00 p.m.
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. Kramer (DF FEE Energy)
A. Figueroa (City of Norwalk)
N. Irish (SGI/Apex)

Other Attendees

E. Davis (Jacobs)
V. Carino (Jacobs)
C. Gross (GSA)
D. Swensson (SGI/Apex)
P. Parmentier (SGI/Apex)
L. Graves (SGI/Apex)
B. Thoms (SGI/Apex)
Y. Gallegos (SGI/Apex)
H. Enciso (Norwalk Youth Soccer League)

Acronyms:

1,2-DCA 1,2-dichloroethane
CO₂ carbon dioxide
CFM cubic feet per minute
DFSP Defense Fuel Support Point
DF-FEE Defense Logistics Agency-Energy
DTSC Department of Toxic Substances Control
GSA U.S. General Services Administration
HHRA Human Health Risk Assessment
KMEP Kinder Morgan Energy Partners
LNAPL light non-aqueous phase liquids
MTBE methyl tertiary-butyl ether
NFA No Further Action
O₂ 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 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 4:23 p.m.

Mr. Defibaugh asked for questions and comments on the minutes from the August 24, 2017 RAB meeting. Mr. Defibaugh made a motion for the minutes to be approved as written. Ms. Tracy Winkler seconded the motion. The minutes were approved without opposition.

Attendees introduced themselves.

GSA Update

Chelsey Gross described the 2017, California Senate Bill 50 which states that all Federal land must be offered to the California State Land Commission for active first right of refusal. According to Ms. Gross, it is not expected that SB 50 will affect the proposed conveyance of the 36 acres as this work is in process. According to Ms. Gross, the GSA should receive a *Report of Excess* from the Air Force in April 2018 and are currently waiting for the shallow soil NFA decision in order to accept the property. It is anticipated that the disposition process for the property will begin between April and May 2018.

After the February 2018 RAB meeting, Ms. Gross provided updates (on July 25, 2018) to include in the meeting minutes for informational purposes: The GSA expects a Report of Excess from the Air Force in August 2018. . It is anticipated that the disposition process for the property will begin between September and October 2018. The GSA should receive a Report of Excess from the Air Force in August 2018. It is anticipated that the disposition process for the property will begin between September and October 2018.

After the February 2018 RAB meeting, GSA also provided the following notification language (for informational purposes):

"The General Services Administration is aware that prospective Grantees of Federal property that is located in California may wish to apply to the California State Lands Commission (CSLC) for an exemption or waiver of the State's purported right of first refusal of Federal conveyances under California Public Resources Code section 8560. The United States, as Grantor, has not offered and does not intend to offer a right of first refusal to the State of California and/or the CSLC pursuant to California Public Resources Code section 8560. The United States has filed suit to challenge the constitutionality of the law under which section 8560 was enacted, 2017 California Senate Bill 50 (Stats. 2017, ch. 535) ("SB 50"). The CSLC's granting of a certificate of compliance for Federal property located in California does not reflect any waiver or concession by the United States of any issue in that litigation."

GSA provided the notification language (above) to include, and is hereby included, into meeting minutes.

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KMEP Update Eric Davis, Jacobs

Remediation Operations Update

Mr. Eric Davis, Jacobs Project Manager for the DFSP Norwalk site, provided an update on KMEP's remediation systems operation, completed remediation activities, planned remediation activities, and a summary of the 2017 semi-annual Ground Water Monitoring Report.

Mr. Davis summarized 3rd and 4th quarter data for all of KMEP's treatment systems onsite, including the SVE, GWE, TFE, and Biosparge systems. These systems are located in the South-Central and Southeast areas.

The SVE and biosparge systems were not operational during September 1 to 7, 2017 of the 3rd quarter of 2017 due to soil vapor probe sampling. During the 3rd quarter, the equivalent fuel treated by the SVE was approximately 3,043 gallons. During the 4th quarter, SVE was shut down September 26 through October 6, 2017 to facilitate gauging and sampling activities, the fuel removed was approximately 2,437 gallons; Since 1995, KMEP has removed approximately 533,442 gallons of fuel.

During the 3rd quarter, KMEP extracted approximately 1,021,000 gallons of groundwater from the South-Central and Southeastern areas. During the 4th quarter, KMEP extracted approximately 812,187 gallons of groundwater in the South-Central and Southeastern areas. Since 1995, KMEP has extracted approximately 102.6 million gallons of groundwater, with 27 million gallons removed from the West Side Barrier, which was discontinued in 2008 due to diminishing returns.

Fuel treated by the TFE/GWE system in the 3rd quarter was 20 gallons, and during the 4th quarter was 17 gallons. The decrease in concentration is likely due to ongoing remedial activities.

There was no free-product extracted during the 3rd and 4th quarter due to a decline in measurable product in extraction wells. Since 1995, KMEP has removed 14,426 gallons of free product.

Completed Remediation Activities

Mr. Davis provided an explanation of the existing horizontal biosparge well layout and design for a proposed, new Southeastern biosparge well.

Mr. Davis described a schematic of typical soil vapor monitoring probes; the construction of these wells includes one, two, or three sampling points each to allow monitoring of various depths below the ground surface.

LNAPL Mobility Evaluation

An evaluation of the potential for LNAPL mobility was completed. This evaluation consisted of data from the field, borings, gauging data, and in-situ free product mobility tests as well as lab, pore fluid saturation tests and stepped LNAPL mobility analysis, which indicated low mobility.

Hydrographs, precipitation data, dissolved phase trends, and diagnostic gauge plots are being used to classify LNAPL as to whether the LNAPL is static (not moving) or potentially mobile (able to migrate). Understanding LNAPL mobility at a site is key to managing the problem.

Mr. Davis then explained a typical hydrograph which shows water table, LNAPL thickness, and top and bottom of screen. Hydrographs were used to help evaluate the effects of rainfall on LNAPL, which showed that LNAPL spiked when the water table dropped below the perched layer.

Mr. Davis proceeded to point out product thickness and top and bottom of screen.

Ms. Winkler asked what a screen is.

Mr. Davis explained that the screen is that portion of a groundwater monitoring well which is constructed of slotted (a series of thin, parallel cuts) sections of PVC pipe which permits groundwater or LNAPL present in the surrounding aquifer to enter the well for collection and testing. The remainder of the monitoring well is constructed of solid PVC piping.

Mr. Defibaugh noted that the water table has dropped significantly with drought to 30 feet below surface grade, that is when LNAPL occurrence and mobility was affected; this may not be as noticeable in future due to constant remediation efforts.

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Mr. Irish explained how free product occurs in the subsurface material and how product may get trapped between soil grains, when the groundwater rises, and removal of this "trapped" product is possible but challenging.

Mr. Davis continued to explain a typical Diagnostic Gauge Plot and how it indicates the LNAPL in correlation with the water interface. This concluded that LNAPL thickness in wells is dependent on water levels.

The large fluctuations in LNAPL thickness is likely due to perching intervals in some wells. The distribution of LNAPL in the well may change due to fluctuations in the water table. The distribution of LNAPL in the wells may change due to water table fluctuations, but the mobility of LNAPL is unlikely to be affected.

Human Health Risk Assessment

Data collected was provided to SGI/Apex and was also compared to soil clean up goals for groundwater protection. The results were all below soil clean up goals for groundwater protection except TPH-d and naphthalene, in one location (SVP-108) at a depth of 10 feet. Therefore, there is no human health risk in the upper 10 feet of soil in the southern portion of the 36-acre parcel.

SVE System Southeastern Area Update

Mr. Davis spoke of what was planned for that area. The new well is currently inactive. There is a need to mitigate risk of air, estimate the capture zone and measure the ZOI (zone of Influence). Additional soil vapor probes are to be installed in residential areas in the southeast. It is unknown at this point if the system will need to be expanded.

Post-Biosparging LNAPL Characterization in South-central Area

Mr. Davis stated they are to conduct a follow-up LNAPL study to evaluate changes in the subsurface since the start of biosparging activities. He presented a cartoon of an LIF probe to explain how they measure the LNAPL. The study will include direct measurement of LNAPL pore fluid saturation and grain size distribution before and after treatment. This will provide direct evidence of biosparge system effectiveness.

Ms. Winkler asked Mr. Davis If probe goes into a well or into dirt.

Mr. Davis stated that it does not go into a well but straight into the dirt surface.

Ms. Winkler asked how deep probes go.

Mr. Davis stated that no deeper than 45 feet.

Ms. McIntosh asked if Mr. Davis could repeat when the follow up study will occur.

Mr. Davis confirmed that it will take place in the first half of the year.

DLA Update Report Neil Irish, SGI/Apex

Mr. Irish described the results of the treatment system.

Groundwater Remediation: 396,896 gallons in 4th Quarter with Treated 77.77mm gallons since April 1996.

SVE system: Recovered 5,2384 lbs. of petroleum hydrocarbons. in the 4th Quarter of 2017, with 2.97mm pounds of petroleum hydrocarbons recovered by DLA efforts since April 1996.

The SVE system is operating using horizontal SVE wells and includes vapor extraction from wells located in east and south parts of the Site. A temporary 500-scfm gas-fired oxidizer is being operated due to increased vapor concentrations, but the hours of operation of the oxidizer are limited due to noise concerns.

Ms. Alvarez asked if the noise concern is –associated with the temporary oxidizer.

Mr. Irish confirmed that it is.

Ms. McIntosh asked if there was a sound wall that could be added to reduce noise.

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Mr. Irish confirmed the use of handheld devices were used to monitor sound levels to ensure that decibels were within city allowance and not operating during the night. DLA is currently having a new thermal oxidizer built; this new unit will have integrated sound dampening and is not expected to pose noise issues.

LNAPL Recovery: 212 gallons recovered 4th Quarter.

Mr. Irish showed a map and explained the In-Situ Treatment System, including locations of wells and the groundwater concentration levels.

Soil Remediation-Sitewide

Mr. Irish reported that DLA has completed their shallow soil remediation efforts. All soil between 0-10 feet with contamination above Cleanup goals has been excavated and treated.

The Eastern Area Report (Second Addendum to the Revised Human Health Risk Assessment for No Further Action Determination for Shallow Soil at the Eastern 15-Acre Parcel) addendum submitted to RWQCB on July 13, 2017. The Western area Report (Shallow Soil Closure Report, Western Portion) was submitted to the RWQCB on Jan. 23, 2018.

Deeper soil remediation will be accomplished via an expanded network of vapor extraction, LNAPL recovery, groundwater extraction, and biosparge wells, and the continued use of the existing horizontal vapor extraction wells

LNAPL Recovery is currently occurring from six wells near TF-18.

4th Quarter 2017 and 1st Quarter 2018: Installed 118 Remediation wells. The piping between wells and the remediation system is being installed in trenches below ground, and surveyed and documented so that the Site remediation piping documentation can be provided to the city and future Site developers.

Groundwater-Planning for Next Phase

Mr. Irish explained next steps;

1. LNAPL CSM Submitted that included proposed LNAPL removal by skimming and biosparging, now under implementation.
2. Restarting SVE well network and Biosparging, also increasing Air Sparge capacity.
3. Completed LNAPL Recovery Testing--Report pending.

Ms. Winkler asked what naming convention was used for all the new wells?

Mr. Irish stated that the wells are named according to their use (e.g. if it is a bio vent well it will be labeled "BV", if a sparge well it will be labeled "SP"). In the past, there were TF wells which stood for "Total Fluids".

Ms. Winkler asked how deep are these wells.

Mr. Irish continued to explain that it would depend on the type of well. Vapor extraction wells would be approximately 25 feet, Total Fluid wells would be deeper (45-50 feet), and air sparge wells would go to 45 feet.

Ms. Winkler what if there is a building on top of the wells? How is that going to work?

Mr. Irish stated that typically you wouldn't want a building over an air sparging well. The purpose of this well is to generate vapors. You would need to curtail air sparge wells under buildings. You would continue remediation from perimeter of building.

Ms. Winkler asked "Are you done removing soil?"

Mr. Irish stated "Yes, all done with the trucking."

Ms. McIntosh added that, in the past, when meeting with developers it was discussed that building would have to be done around the remediation wells, and the developers are willing to work with these circumstances..

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Second Semiannual 2017 Groundwater Monitoring Event Daniel Swensson, SGI/Apex

Mr. Swensson stated that the fieldwork was conducted September 25 through October 25, 2017. Well gauging for 226 wells was conducted by The Source Group, Blaine Tech, and SFPP. There were 140 groundwater samples collected from 114 wells.

Mr. Swensson explained that floating product was measured in 17 of 226 wells, and since April 2017 product thickness increased in 10 wells and decreased in 13 wells. The product was found in 11 wells in the north-central area, two wells in the eastern area, two wells in south-central area and two wells in the southeastern area.

Mr. Swensson went over findings in the groundwater sampling, and he explained that inconsistencies in three wells' data indicated possible cross-contamination. To evaluate the inconsistencies, confirmation samples were collected and they revealed cross contamination may have occurred. There was additional training for field personnel, and SGI established the use of three pumps exclusively for this job. One pump will be used exclusively for non-detect wells, a second for moderately impacted wells, and the last one for the more heavily impacted wells. We are eager to see results on proposed quarterly samples, 1ST Quarter sampling was not collected due to access issues.

Mr. Defibaugh stated that based on previous discussion Kinder Morgan did collect additional samples at EXP-1, so we do have results.

Mr. Swensson asked what the results were.

Mr. Davis confirmed that the results were consistent with the previous six sampling events, which was 2 or 3 ppb, below the NCL. Minutes from previous meeting captures discussion on page 5.

Mr. Swensson asked if there were any questions.

Ms. Alvarez asked if the sampling will occur quarterly.

Mr. Swensson confirmed that this would be taking place, until it is no longer a concern.

Ms. Winkler asked if floating product was observed in 17 of the wells, does this mean you could not test those 17 wells?

Mr. Swensson said we do not collect groundwater samples from a well that contains floating product.

Ms. Winkler asked how do we know which 17 wells had product, is there a list?

Mr. Swensson stated that a list is in the report under the gauging data column with product thickness.

Mr. Irish confirmed that it is on Table 2, Figure 4.

Ms. Winkler asked if there was concern about the quality of groundwater in the deeper Exposition aquifer.

Mr. Swensson stated that there really isn't a concern about the deeper aquifer, but we do want to monitor the dissolved contaminant levels. The presence of contaminants in the eastern offsite wells will also be monitored.

Mr. Irish stated that we have installed additional sparge points and vapor extraction points, and the drilling of the wells and pilot testing may have stirred up contaminants which has caused a change in concentrations. We will continue to monitor contaminant levels during system startup.

Mr. Davis asked if you have noticed change with vertical gradients?

Mr. Swensson stated that they have not noticed any.

Mr. Cho asked for clarification on the EXP (Exposition Aquifer) wells next quarter sampling and monitoring and whom would be monitoring SGI/Apex or Kinder Morgan, due to the previous inconsistency.

Mr. Davis confirmed it will be part of the semiannual that even though inconsistency existed, it was within the historical range.

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Regulatory Agency Update Paul Cho, Regional Water Quality Control Board

Mr. Paul Cho, the Regional Water Quality Control Board (Regional Board) Project Manager for the Norwalk site, stated that the eastern area 15-acre parcel Closure Request Report, was reviewed by the state toxicologist from the Office of Environmental Health Hazard Assessment and determined it was satisfactory. The eastern 15-acre park portion is now in the final technical review and should have a final approval soon. A similar report has been submitted for the eastern part of the site and the same procedures will be followed. The RWQCB will continue to work with DLA Energy and Kinder Morgan Energy Partners to facilitate closure.

Set Date and Agenda for Next Meeting

The next semiannual RAB meetings will be held on Thursday, August 23, 2018, at 4:00 p.m. in the Hargitt Room at the Norwalk Arts & Sports Complex. Agenda items to be included are pilot testing and remediation system updates.

Public Comment Period

Ms. McIntosh Missed the GSA update.

Ms. Gross repeated the previously stated: Working with Air Force and should have conditional acceptance in April, waiting for NFA to move forward. Also, brief update on Senate Bill 50.

Mr. Defibaugh adjourned 6:01pm.

ACTION ITEMS

Item	Responsible Party	Due Date
Schedule August 2018 RAB Meetings in Hargitt Room	Adriana Figueroa / Lisa Graves	Meeting Scheduled for August 23, 2018