

DRAFT

**FORMER NAVAL AIR STATION MOFFETT FIELD  
RESTORATION ADVISORY BOARD MEETING  
MOUNTAIN VIEW SENIOR CENTER  
MOUNTAIN VIEW, CALIFORNIA  
NOVEMBER 14, 2013**

*NOTE: An acronym list is provided on the last page of these minutes.*

**Subject: RESTORATION ADVISORY BOARD MEETING MINUTES**

The Restoration Advisory Board (RAB) meeting for Former Naval Air Station (NAS) Moffett Field was held on Thursday, November 14, 2013, at the Senior Center in Mountain View, California.

**Community RAB Members in attendance:**

Bill Berry, Gabriel Diaconescu, Larry Ellis, Rebecca Kohn, Libby Lucas, Diane Minasian, Bob Moss, Arthur Schwartz, Lenny Siegel, Steve Sprugasci, Greg Unangst, Dan Wallace, and Steve Williams

**Regulatory Agency and Navy RAB Members in attendance:**

Scott Anderson (Navy), Yvonne Fong (U.S. Environmental Protection Agency [EPA]), Alana Lee (EPA), Penny Reddy (EPA), and Elizabeth Wells (San Francisco Bay Regional Water Quality Control Board [Water Board])

**Other Navy, Regulatory Agency, National Aeronautics and Space Administration (NASA), City, and Consultant Representatives in attendance:**

Don Chuck (NASA), Yashekia Evans (Tetra Tech Inc. [Tetra Tech]), Kimberly Finch (NASA), Valerie Harris (Navy), Andy Hocker (NASA), Carolyn Hunter (Tetra Tech), Lynne Kilpatrick (City of Sunnyvale), Garrett Kuhl (Tetra Tech), and George Sloup (NASA)

**Other Community Members and Agency Representatives in attendance:**

Sean Casey, Lee Colin, Ken Mateik, Rex McIntosh, Marty Rawson, Jeff Segall, C.K. Shah (Country Inn), Myranda Shah (Country Inn), M.T. Skoog, and Bill Wissel

**WELCOME**

Bill Berry (RAB Community Co-Chair) opened the meeting at 7:00 p.m. and welcomed everyone in attendance. Mr. Berry reviewed the agenda and said that NASA and General Services Administration (GSA) do not have an update on the proposals for the surplus property at Former NAS Moffett Field. Due to the government shutdowns and furloughs, the proposal submittal due date has been extended. RAB member Bob Moss asked for an update on the U.S. Army's (Army's) work at Orion Park. Scott Anderson (RAB Navy Co-Chair) said that the Army is aware that the RAB would like a presentation and hopes to provide an update on Orion Park at the next RAB meeting. The Army was unable to travel to this RAB meeting due to the furlough schedule. Mr. Moss requested a presentation by the Army on Orion Park be added to the next RAB meeting agenda. Mr. Anderson said the Navy will take any of the RAB's recommendations on presentation topics for the February 13, 2014 meeting agenda. Mr. Anderson said that if additional agenda topics arise prior to the next RAB meeting they can be emailed to him and the Navy will consider them. RAB member Lenny Siegel requested an update on NASA's Area of Investigation (AOI)-14. Mr. Anderson said that NASA can provide an update on AOI-14 after the Navy's update during this RAB meeting.

**APPROVAL OF MEETING MINUTES**

Scott Anderson (RAB Navy Co-Chair) asked for corrections to or comments on the minutes for the draft August 22, 2013, RAB meeting. Mr. Berry said that the August 22, 2013 RAB meeting minutes need to be updated to include a motion he made to acknowledge the Navy and their contractor’s exceptional work at Hangar 1 and not to draft a letter to be submitted as indicated in the meeting minutes. The RAB voted to finalize the August 22, 2013 meeting minutes with Mr. Berry’s edits.

Mr. Anderson reviewed and handed out a document sign-up sheet, allowing RAB members to request copies of upcoming deliverables; see table below.

**Document Sign-Up Table**

<u>DOCUMENT</u>		<u>APPROXIMATE SUBMITTAL DATE</u>
1.	Final Site 1 Groundwater Monitoring Optimization Report	February 2014

**NAVY ANNOUNCEMENTS**

Mr. Anderson announced that there have been some promotions within the Base Realignment and Closure (BRAC) Program Management Office (PMO). Kim Ostrowski is now the director of BRAC PMO West and Laura Duchnak is the director of all of BRAC PMO. The Base Closure Manager (BCM) and Deputy BCM for Former NAS Moffett Field are John Hill and Deb Theroux. There are no other staffing changes on the Former NAS Moffett Field team.

- Mr. Siegel asked what the timetable is for the permanent remedy at the AOI-14 stormwater retention ponds. Don Chuck (NASA) said that NASA plans to conduct a dig and haul at AOI-14 at the end of fiscal year 2014 in August or September 2014. Mr. Chuck will keep the RAB updated on the progress at AOI-14.

Mr. Chuck introduced Kimberly Finch (NASA) as the new environmental manager at Former NAS Moffett Field. Ms. Finch will be participating in future RAB meetings. Ms. Finch’s contact information is listed on the point of contact sheet that is available as a handout to the RAB.

**REGULATORY AGENCY UPDATE**

Elizabeth Wells (Water Board) gave an update on the ongoing projects the Water Board regulates for the Navy. Ms. Wells said the federal and state regulatory agencies are involved in the vapor intrusion work, the Site 26 record of decision (ROD), the groundwater studies at Site 28, Hangar 1, and the Sites 1 and 22 Landfills. Ms. Wells said that the Navy has done some additional sampling for metals at the Site 1 Landfill. Ms. Wells said that the Water Board has been working with the Navy on the petroleum program and the majority of those sites are closed. There is monitoring being conducted at petroleum program Site 8 and remediation and monitoring at Site 14.

- Mr. Siegel asked for an update on NASA’s petroleum pipe removal at the base. Mr. Chuck said that NASA has almost completely removed all of the above ground petroleum pipes and will begin work on the underground pipes.

Yvonne Fong (EPA) said that EPA has been working on a Federal Facility Agreement (FFA) with NASA for its responsibilities at the Former NAS Moffett Field site which should be finalized and signed by NASA, EPA, and Water Board in early 2014.

Ms. Fong said that the FFA will address most of NASA's sites, including institutional controls and implementation of the groundwater and vapor intrusion remedy in its area of responsibility. Work at AOI-14 is not included because that is currently covered by a separate agreement. Ms. Fong said the other item EPA has been working on is a request for Finding of Suitability to Lease (FOSL). Ms. Fong said EPA issued a letter to NASA, on September 26<sup>th</sup> and copied GSA, requesting that NASA develop some form of conditions report that would make future potential lessees aware of the condition of the property that they might be leasing. The FOSL is a requirement under CERCLA and should be completed so that future lessees are aware of any responsibilities they may have as far as not disrupting remedies that are in place or providing access to agencies or contractors involved in cleanup operations. Ms. Fong said that AOI-14 is a group of 3 peninsulas (adjacent and west of Navy IR Site 25). In March 2013 EPA issued a Resource Conservation and Recovery Act (RCRA) order to NASA to conduct an interim action that would protect the Navy's Site 25 cleanup and ultimately get a permanent remedy in place. Currently NASA is in the process of installing a silt fence at AOI-14 and will conduct a removal action in 2014.

- Mr. Berry asked what NASA's position on a Finding of Suitability to Lease. What is their intent is for future leasing at former NAS Moffett Field? Ms. Fong said that NASA is working on information to provide to EPA on the future leasing at former NAS Moffett Field.
- Mr. Siegel asked how the FOSL might impact the leasing plans for Moffett Field. Ms. Fong said that information in the Environmental Baseline Survey that supports the Finding of Suitability that NASA would make could be viewed as either favorable or unfavorable by potential lessees as far as their plans for the property. Mr. Siegel asked about the time table for the FOSL and how regulatory review of the FOSL could impact the schedule for leasing property at former NAS Moffett Field. Ms. Fong said that it is EPA's expectation that the FOSL will be completed and concurred on by the Agencies prior to the execution of any lease. Ms. Fong said there is still adequate time in the lessee selection process and lease negotiation process for NASA to satisfy those requirements before the lease is signed.
- Mr. Siegel asked what the RCRA requirements are for AOI-14. Ms. Fong said the requirements for AOI-14 are very similar and that NASA will have to prepare a remedial investigation/feasibility study equivalent document and a proposed plan equivalent for AOI-14. Ms. Fong said EPA will ultimately select or concur on the cleanup decision. The regulatory agencies will have to review and concur with the NASA's document findings.
- A community member asked if known issues were not disclosed by the RFP or the links in the RFP. Ms. Fong said the RFP was somewhat open-ended about what responsibilities a potential lessee might have. Ms. Fong said there was information for Hangar 1 but as far as she could see there wasn't any information on Sites 1 and 22 which are landfills on the eastern side of the runway that are included in the RFP. Sites 1 and 22 have conditions on it that would need to be met by a potential lessee and those were not included in the RFP.

Penny Reddy (EPA) gave an update on EPA's work on the regional groundwater cleanup activities. To help further assess that the western portion of the regional TCE groundwater contamination plume is hydraulically contained five additional groundwater monitoring wells will be installed in both the shallow and lower aquifers.

- Mr. Siegel asked how EPA addresses TCE found at 5 parts per billion (ppb) that is out of the boundary of the groundwater plume. Since 5 ppb of TCE is below the maximum contaminant level does EPA conduct any action to address it outside of the groundwater plume? Ms. Reddy said that EPA would

consider the groundwater plume defined and characterized if TCE outside of the groundwater plume is below 5 ppb. No additional cleanup outside of the plume is necessary.

### **EPA LEONG DRIVE POTENTIAL SOURCE AREA UPDATE**

Alana Lee (EPA) said that EPA hosted a public meeting at on November 12, 2013, to provide an update on EPA's source investigation of the trichloroethene (TCE) hot spot areas, summary of residential indoor air sampling results, and plans for in-situ chemical oxidation pilot test to clean up the TCE hot spots in the residential area south of U.S. Highway 101. Ms. Lee said that EPA will focus this presentation to the RAB on the potential source investigation of the TCE hot spot areas, particularly the work conducted in the Leong Drive area. Ms. Lee said EPA's previous groundwater investigations in 2005 and 2011 were to determine the extent of groundwater contamination south of the Army's Orion Park area at former NAS Moffett Field (referred to by EPA as the Highway 101 and Moffett Blvd Study Area). EPA's 2005 sampling event and a private owner's investigation on Leong Drive prompted further investigation of the TCE groundwater hot spot areas at Leong Drive and the former vector control yard property at 750 Moffett Blvd, which is owned by the City of Mountain View. In late 2012, as part of the Middlefield-Ellis-Whisman (MEW) groundwater work to determine the extent of the western boundary of the MEW regional groundwater contamination plume, two TCE hot spot areas were identified on Evandale Avenue. EPA immediately sampled 30 homes in close proximity to the two hot spot areas and of those homes samples, two residences had TCE indoor air concentrations exceeding the EPA TCE residential indoor air cleanup level of 1 microgram per cubic meter. Vapor intrusion mitigation systems were promptly installed to lower the TCE indoor air levels and indoor air samples were collected to confirm that the TCE indoor air levels are below the cleanup levels. In March 2013, EPA held a neighborhood meeting to present the vapor intrusion results, and expanded the area for free indoor air testing to include all residences where TCE in groundwater exceeds 5 parts per billion. In 2013, EPA sampled approximately 95 residences.

Ms. Lee said that EPA conducted membrane interface probe (MIP) profiling in the TCE hot spot areas and indicated the MIP results at the Leong Drive hot spot area show there was a high response at multiple depths, including a shallow depth of 10 feet below ground surface (bgs).

A community member asked if the sewer lines that are located 13-15 feet bgs could be responsible for the soil vapor since the MIP high reading was at 11 feet. Ms. Lee said that EPA has not concluded what the source of the TCE hot spot area on this property.

Soil gas concentrations near the TCE hot spot area in the parking lot of the 850 Leong Drive property exceeded 1 million micrograms per cubic meter at 5 feet and 10 feet bgs. This prompted EPA to immediately conduct real-time indoor air testing of the 27 ground floor units of the motel using EPA's Trace Atmospheric Gas Analyzer. EPA followed up with 24-hour indoor air samples of the two units where there were elevated TCE levels. TCE was not detected in these two units.

- RAB member Steve Williams said that there are TCE concerns south of the sewer lines above Leong Drive, which could be further evidence that the groundwater plume may be due to the sewer lines. Ms. Lee said that EPA has not fully evaluated information in the area to determine the source of the TCE. Ms. Lee said that as further information is available on EPA's potential source investigation, EPA will provide updates to the RAB.
- Mr. Berry asked if sewer lines have been there since the period when TCE was commonly used. Ms. Lee said that the sewer lines in this area date back to the 1950s. Mr. Berry asked, what is the direction of the flow of the sewer line? Ms. Lee said the sewer line flows west down Evandale, south on Leong Drive, west across the 850 Leong Drive property, Moffett Blvd, and the Gateway property and then north parallel to Stevens Creek. Ms. Wells said the storm drains flow toward Stevens Creek and the sanitary sewer lines flow toward the Palo Alto sewage treatment plant.

- Mr. Williams said that EPA should investigate downgradient of the sewer line flow direction to determine how much vapor intrusion is occurring. There have been recent newspaper articles that discuss the need for vapor intrusion mitigations systems being installed into new buildings in Silicon Valley. Ms. Lee said that generally where new buildings will overlie the shallow groundwater contamination and there is a potential vapor intrusion concern, then a vapor intrusion mitigation may be necessary to be protective of future building occupants. Ms. Wells said that high TCE groundwater concentrations are also located in close proximity of the sewer lines on the former vector control yard (referred to by the City of Mountain View as the Moffett Gateway property). The City of Mountain View submitted a subsurface investigation report for the Moffett Gateway property to address data gaps. The Water Board and EPA are reviewing the data along with the surrounding data to determine the path forward.
- Mr. Williams asked if the contamination at Orion Park is due the groundwater plume from Leong Drive migrating onto Former NAS Moffett Field. Ms. Lee said EPA has reviewed the Navy's and Army's data collected at Orion Park and the Agencies acknowledge that TCE groundwater contamination has migrated from the south onto the former Orion Park area, however, EPA is evaluating all the data in the area as the TCE concentrations found upgradient on the Gateway and Leong Drive properties does not necessarily explain the potential hot spot areas found on the former Orion Park Area. The Army's additional work at Orion Park is currently on hold pending the regulatory agencies evaluation of all the data. Ms. Wells said that there appears to be at least one TCE groundwater hotspot at Orion Park that is approximately 1,000 ppb. The lithology of the area is very complicated and it will take time to determine what are the sources of these hot spots.
- Mr. Siegel asked if there is an elevator in the hotel located on Leong Drive that can be impacted by vapor intrusion. Ms. Lee said that there is not an elevator at this motel. Mr. Siegel asked if there is a dry cleaner that has contributed to the groundwater plume. Ms. Wells said that tetrachloroethene (PCE) has not been detected at the Moffett Gateway, Orion Park, or the 850 and 870 Leong Drive properties. Ms. Wells said that if contamination attributed to dry cleaning operations is found in the sampling results that it will be referred to the Water Board's toxics cleanup program to be addressed.
- Mr. Siegel asked if any of the data from the hot spots from the historic semiconductor work at the MEW Site or Fairchild's could be impacting Leong Drive. Ms. Lee said EPA is evaluating all previous and potential releases in EPA's source investigation of the TCE hot spot areas, including the TCE hot spot area. Mr. Siegel said there are some news articles from 1978 on contaminants that were released from Fairchild that would be plausible sources for the hot spots found at Leong Drive. Mr. Siegel said that the more information on the area surrounding Leong Drive will help determine responsibility and financial resources to address the contamination, so future exposure to the public can be mitigated.
- A community member asked if EPA has studied the manholes near the Leong Drive hot spots to see if there is vapor intrusion occurring. Ms. Lee said that EPA has not studied the manholes or drawn any conclusions from the data collected at this point.
- A community member asked if a camera has been put through the sewer lines to determine what is down there. Ms. Lee said the City of Mountain View has used a camera in some of the sewer lines but it has not been comprehensive of all of the sewer lines in the area.

## **SITE 28 SUPPLEMENTAL SOIL AND GROUNDWATER INVESTIGATION UPDATE**

Valerie Harris (Navy) introduced Neil Hey (Chicago Bridge and Iron [CB&I] Federal Solutions) as the Navy's contractor conducting the Site 28 supplemental investigation (SI) work. Ms. Harris said that she would be going over the site background, project objectives, technical approach, preliminary results, and additional work

planned at the Building 88 Area and the Traffic Island Area. The Navy performed treatability tests at Site 28 between July 2010 and June 2011. The high concentrations of chlorinated ethenes in the shallow and deep wells were targeted for further investigation at the Former Building 88 and Traffic Island Areas. Ms. Harris said the SI will further delineate the PCE and daughter products in the A-aquifer in and around Former Building 88 and the Traffic Island source areas, confirm depth and lateral continuity of A/B-aquitard in the Traffic Island Area, verify depth to top of B2-aquifer in the Traffic Island Area, confirm if existing well W88-1 is screened in materials representing the B2-aquifer and confirm whether the B2-aquifer beneath the Traffic Island Area is impacted by COCs above the ROD cleanup standards.

Ms. Harris said that the Navy conducted a Site Characterization and Analysis Penetrometer System (SCAPS) investigation at the Building 88 Area in 2012. There were 24 SCAPS tests up to 70 feet bgs, 9 soil samples, and 9 grab groundwater samples at Building 88. There were two to three soil samples taken from each groundwater well borehole and two rounds of groundwater samples collected from the six newly installed wells. Ms. Harris said that the soil and groundwater samples taken in the shallow wells did not have PCE concentrations at a level indicative of a source area and the deeper well sample results came back at higher concentrations. Although the concentrations in the Building 88 Area are higher in the lower A-aquifer, there are existing groundwater wells down gradient that provide definition on the PCE concentrations in this depth interval.

Ms. Harris said that there were 28 SCAPS tests to 100 feet and 2 SCAPS tests to 115 feet at the Traffic Island Area performed in 2013. Based on contamination found during the SCAPS tests, the Navy installed 12 new groundwater wells in the Traffic Island Area with two to three soil samples collected from each groundwater well borehole. The results of the soil and groundwater sampling from the monitoring well boreholes identified several data gaps. To fill these data gaps in the Traffic Island Area, the Navy plans to install an additional 3 groundwater monitoring wells in December 2013. Once the Navy has the results from the sampling for these newly installed wells, they will issue a Draft Technical Memorandum in May 2014 that will describe the path forward for the Building 88 and Traffic Island Areas.

- Mr. Williams asked what is meant by “screens” placed in the monitoring wells and if the Navy knows the depth of the well screen in W88-1. Ms. Harris said that the screens in the monitoring wells are used to help determine the depth to groundwater and what is in the groundwater at that location. Regarding well W88-1, the Navy knows the depth of the well screen, but does not know the type of soil that the well is screened across. The Navy doesn’t know if samples collected from that well represent the lower A aquifer or the B2 aquifer.
- Mr. Moss said there has been success in the past doing well injections and asked if the Navy is considering that type of action at Site 28 in the future. Ms. Harris said the Navy will complete the data evaluation phase for Site 28 prior to determining the best cleanup method. Currently the Navy has the Westside Aquifers Treatment System (WATS) system in place cleaning up the groundwater with pump and treatment and may consider an injection treatment in the future for Site 28.
- RAB member Larry Ellis said all of the data that has been collected on Site 28 from the Navy’s consultant’s needs to be publicly available when leases open up on Former NAS Moffett Field to mitigate any future public safety issues. Mr. Anderson said the Navy will make sure that Site 28 data is publicly available. Ms. Fong said that all of the data will be made available in the FOSL, which is made public.
- Mr. Siegel asked if the sewer lines were laid in gravel, which could cause vapor intrusion issues. Mr. Chuck said the sewer lines were laid in clay.
- A community member asked why there are higher concentrations of PCE in the middle level of the aquifer. Ms. Harris said that PCE and daughter products tend to sink because they are heavy and they have been there a long time.

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- Mr. Williams asked if there were sewer pipes installed around the time there was a dry cleaner located at Site 28. Ms. Harris said the Navy has that information and she can share it with Mr. Williams. She does not know off the top of her head when the sewer pipes were installed and when the dry cleaner was operated. Mr. Chuck said that the sewer line was installed in the 1940s and operated during the time Hangar 1 and Building 88 were in use. It is not known when the line collapsed but the sewer was replaced in that area in the 1970s or 1980s.

## **PUBLIC COMMENT / QUESTION PERIOD**

Mr. Anderson opened the meeting for questions or comments from the public. No public comments were provided at this time.

## **FUTURE RAB MEETINGS**

Mr. Anderson asked for future RAB topics. The next meeting is scheduled for Thursday, February 13, 2014. Mr. Anderson said that he is working with the Army to get an Orion Park update for the next meeting.

- Mr. Berry asked for an update from NASA and GSA on the status of the surplus property RFP, the issues between the Navy and NASA on the FOSL, and an update on the future responsibility of operation and maintenance at Hangar 1.
- Mr. Moss asked for information on the Hangar 1 bid content and who submitted proposals for future use to NASA. Mr. Moss also asked for an update on Site 25 and if the cleanup and replanting of pickleweed has been effective. Mr. Anderson said the Final Remedial Action Completion Report (RACR) for Site 25 would help answer some of Mr. Moss' questions. Mr. Anderson will make sure to get a copy of the Site 25 Final RACR to Mr. Moss prior to the next RAB meeting.

## **ADJOURN**

The meeting was adjourned at 9:00 p.m., and Mr. Anderson thanked all present for attending.

The Navy can be contacted with any comments or questions:

Mr. Scott Anderson  
Base Realignment and Closure (BRAC) Environmental Coordinator, Former NAS Moffett Field  
BRAC Project Management Office West  
1455 Frazee Road, Suite 900  
San Diego, CA 92108  
Phone: (619) 532-0938  
E-mail: [scott.d.anderson@navy.mil](mailto:scott.d.anderson@navy.mil)

## **ACRONYM LIST**

Army - U.S. Army  
AOI – Area of Interest  
BCM – Base Closure Manager  
bgs – below ground surface  
BRAC – Base Realignment and Closure  
EPA – U.S. Environmental Protection Agency  
FFA – Federal Facility Agreement  
FOSL – Finding of Suitability to Lease  
GSA – General Services Administration

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MEW – Middlefield-Ellis -Whisman

MIP – Membrane Interface Probe

NAS – Naval Air Station

NASA – National Aeronautics and Space Administration

PCE –Tetrachloroethene

PMO – Project Management Office

ppb – Parts per billion

RAB – Restoration Advisory Board

RACR – Remedial Action Closeout Report

RCRA – Resource Conservation and Recovery Act

RFP - Request for proposal

ROD –Record of Decision

SCAPS – Site Characterization Analysis and Penetrometer System

SI – Site Investigation

TCE - Trichlorethene

Water Board - San Francisco Bay Regional Water Quality Control Board

WATS – Westside Aquifer Treatment System

RAB meeting minutes are posted on the Navy’s environmental website at:

[http://www.bracpmo.navy.mil/brac\\_bases/california/former\\_nas\\_moffett\\_field.html](http://www.bracpmo.navy.mil/brac_bases/california/former_nas_moffett_field.html)

Respectfully submitted,

Scott Anderson

Navy Co-Chair,

Former NAS Moffett Field RAB