

FINAL

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

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

Subject: RAB MEETING MINUTES

The Restoration Advisory Board (RAB) meeting for former Naval Air Station (NAS) Moffett Field was held on Thursday, February 9, 2012, at the Senior Center in Mountain View, California.

Community RAB Members in attendance:

Bill Berry, Joseph Chou, Gabriel Diaconescu, Linda Ellis, Patricia Guerrieri, Diane Minasian, Bob Moss, Ralph Otte, Arthur Schwartz, Lenny Siegel, Steve Sprugasci, Peter Strauss, Dan Wallace, and Steve Williams

Regulatory Agency and Navy RAB Members in attendance:

Scott Anderson (Navy), Melinda Dragone (U.S. Environmental Protection Agency [EPA]), Alana Lee (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, Army, and Consultant Representatives in attendance:

Dayna Aragon (Tetra Tech EM Inc. [Tetra Tech]), Bryce Bartelma (Navy), Don Chuck (NASA), Camilo Colorado (Resident Officer in Charge of Construction [ROICC] Navy), Deb Feng (NASA), Gaelle Glickfield (U.S. Army Reserve [USAR]), Mark Hightower (NASA), Andy Hocker (NASA), Carolyn Hunter (Tetra Tech), Lynn Kilpatrick (City of Sunnyvale), Mike Mewhinney (NASA), Amanda Michels (Army Environmental Command [AEC]), Mike Mueller (USAR), Terence Pagaduan (NASA), Robert Rowden (AEC), Celso Sabiniano (U.S. Army Corps of Engineers [USACE]), Mike Schulz (AMEC Environmental [AMEC]), Jeremy Schwartz (ROICC Navy), George Sloup (NASA), Kelly Stater (American Integrated Services [AIS]), Terence Pagaduan (NASA), Kevin Woodhouse (City of Mountain View), and Tommie Jean Valmassy (Tetra Tech)

Other Community Members in attendance:

Roderick Bersamina (Rep. Anna Eshoo's office), Truman Cross, Larry Ellis (Air and Space West Foundation for Education), Bill Hough, Georganna Hymes, Jack Nadeau, Jeff Segall, Tammy Skoog, and Greg Unangst

WELCOME

Bill Berry (RAB Community Co-Chair) and Scott Anderson (RAB Navy Co-Chair) opened the meeting at 7:00 p.m. and welcomed everyone in attendance. Mr. Anderson noted that there are seven documents for RAB members to sign up to receive this evening. Mr. Anderson said that at the request of EPA, the Hangar 1 Update will be moved up in the agenda and will be after the NASA Update. The RAB agreed with the agenda change.

APPROVAL OF MEETING MINUTES

Mr. Anderson asked for corrections to or comments on the minutes for the November 3, 2011, RAB meeting. The RAB voted to finalize the minutes for the November 3, 2011, meeting with no changes.

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DOCUMENTS FOR REVIEW

Documents are available in compact disk (CD)-ROM format. A sign-up sheet for the documents listed below was circulated during the meeting to the RAB members.

<u>#</u>	<u>DOCUMENT</u>	<u>APPROXIMATE SUBMITTAL DATE</u>
1.	Draft Final Focused Feasibility Study for Site 26 Eastside Aquifer Treatment System (EATS)	May 2012
2.	Corrective Action Plan for Site 14 South	April 2012
3.	Final Remedial Action Completion Report for Site 27	March 2012
4.	2011 Annual Groundwater Report for IR Sites 26 and 28	April 2012
5.	Draft Monitoring Optimization Annual Report for Site 1	April 2012
6.	Draft Sampling Report for the Petroleum Sites	April 2012
7.	Draft Air Sampling Work Plan for Vapor Intrusion Tier Response Evaluation (Navy Area)	March 2012

NAVY ANNOUNCEMENTS

Mr. Anderson said that the Navy received a request for a RAB tour of the hangar. There will be an exterior tour of Hangar 1 for the RAB in March 2012. Mr. Anderson will send some possible March 2012 dates to the RAB. Mr. Anderson said the Navy is looking into the possibility of a public tour of Hangar 1 in the late fall (October or November 2012) once the removal action is complete.

RAB BUSINESS

Mr. Berry announced that Greg Unangst had applied to be a RAB member and asked for the RAB to vote. Mr. Unangst was unanimously accepted as a RAB member and welcomed to the group.

Mr. Berry read a letter from Representative Anna Eshoo to the RAB members thanking them for their work and updating the RAB on the status of the H211 Proposal.

NASA UPDATE

Deb Feng (NASA) reported that NASA agrees with Representative Eshoo's letter regarding Hangar 1. This issue is being discussed in the higher levels of the government and she believes the appropriate stakeholders are involved. She has no further details at this time but is optimistic that the outcome will be mutually beneficial for all stakeholders, including the local community.

- Ralph Otte (RAB member) asked about the estimated time frame of NASA's decision about the H211 proposal. Ms. Feng reiterated that she expects it to be a positive outcome in the near term but did not have a specific time frame.
- Bob Moss (RAB member) asked how active NASA AMES has been in pushing NASA headquarters to resolve this issue. Ms. Feng responded that NASA AMES has provided all the information to NASA headquarters but is neither pushing nor providing any opinion to headquarters.

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- Lenny Siegel (RAB member) said that he believes NASA headquarters wants to transfer the hangar to a non-federal entity, which could be a problem for the approval of the H211 proposal for use of Hangar 1. He expects the issue to be addressed in conjunction with the President's budget, which is expected to be released the week of February 13, 2012.
- Mr. Siegel was concerned that since the RAB will not meet for another 3 months, the RAB may have to act quickly. Since it is a Superfund site, the transfer will be difficult and slow. Mr. Siegel opposes the transfer now because these conditions mean the hangar will not be transferred for several years. Mr. Siegel continued that if the White House approves transfer of the property, he will propose formation of a citizen's advisory committee on reuse.
- Mr. Berry stated that if there are any developments between now and the next RAB in May 2012, Mr. Siegel can call a meeting of the Hangar 1 subcommittee.

HANGAR 1 UPDATE

Bryce Bartelma (Navy) provided an update on the Navy's work at Hangar 1. Mr. Bartelma reiterated the removal action's objective to control the release of polychlorinated biphenyls (PCBs) from the hangar and the actions taken to achieve that objective.

There have been no observed biological impacts on the site. Every 2 weeks, a biologist performs surveys. Three weeks ago, a biologist saw an owl near the south end of Hangar 1 but it was not present during the last survey two weeks later. Biological monitoring will continue on the 2-week schedule.

The site has been in compliance with stormwater and air monitoring programs.

Mr. Bartelma apologized that the interactive Hangar 1 CD is not ready to be released. The Navy and NASA spent more money than planned to prepare it and had to obtain additional funding, which caused a delay. They hope to have it ready for the next RAB meeting in May 2012.

During his presentation, Mr. Bartelma explained the progress on the removal action since the late fall 2011. As a result of wet and/or humid weather, the coating could not be applied under the specifications of the manufacturer. To make up for this delay, long days, and Saturday work were performed. Zone 1 is completely done. The Navy is continuing the removal action through Zones 2 through 6 of the hangar and is on track to complete the field work, confirmation sampling, and demobilization in the summer of 2012. Once the work is completed, a completion report will be issued in the winter of 2012/2013.

- Peter Strauss (RAB member) asked about the air monitoring system, how it operates, and its cost. Mr. Bartelma responded that there is perimeter air monitoring as well as air monitoring stations within the hangar that are continuously collecting data. Mike Schulz (AMEC) added that each on site worker has a personal lapel monitor to detect asbestos, lead, and PCBs. There are also monitors at the perimeter and at the fence line. There is one monitor upwind and two monitors downwind of the hangar. Mr. Strauss and Mr. Schulz will discuss the cost after the RAB meeting.
- Mr. Strauss asked if anything unexpected had been found during the removal action. Mr. Bartelma said that the Hangar is not a water tight structure and water leaked over several years onto the mezzanine deck. Due to the corrosion of the mezzanine deck, the Navy is having to sand blast the contaminated paint on the mezzanine level, then prime and coat the steel to remove this hazard. Mr. Bartelma also added that there was a mechanism at the hinge pins that had slowly leaked oil for 80 years onto steel. Cleaning this oil required time and money. The Navy also had to remove the contaminated fiber board from around the tracks that support the Clam Shell Doors as well as clean up the oil associated with door mechanisms.

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- Mr. Berry asked if the Navy will create a cross section of the Hangar siding so that future stakeholders can see the composite, layer by layer structure of the hangar. Mr. Bartelma said the Navy would look into creating that.

ARMY UPDATE ON ORION PARK

Kelly Stater (AIS) presented an update on the supplemental site investigation (SSI) for Former Orion Park Housing Area. Orion Park was transferred to the Army from the Air Force in 2000. The U.S. Army Corps of Engineers demolished the buildings and built an Armed Forces "Readiness Center." The SSI focused on nine locations of concern identified from previous investigations and input from EPA and the Water Board. The SSI was conducted in several phases and completed in February 2011. The Army's SSI report concludes that there are no on-site sources of contamination. The historical trichloroethylene (TCE) plume extends from the southern boundary and the TCE is held in the fine-grained soils. .

- Linda Ellis (RAB member) asked during the presentation what units were on one of the graphs on the slides. Mr. Stater and Amanda Michels (AEC) responded that the electrical conductivity was measured in microsiemens per centimeter, and the electron capture detector (ECD) was in millivolts.
- Mr. Siegel asked where the highest concentration was measured in the A2 aquifer. He saw 1,500 parts per billion (ppb) noted and wanted to know where it was located. Mr. Stater said he did not know. Elizabeth Wells (Water Board) said that result was from one of the monitoring wells farther north.
- Mr. Moss asked why there was no soil gas sampling. Dayna Aragon (Tetra Tech) responded that since the groundwater is known to contain TCE, there is no need to conduct soil gas monitoring for the purpose of the supplemental investigation. She said the focus is to determine whether there was a solvent release from the surface that had come through the soil and into the groundwater. Mr. Moss replied that he has known of Superfund sites where the soil gas concentrations were higher than the groundwater concentrations and reiterated his question why soil gas monitoring was not performed. Ms. Aragon acknowledged his comment and replied that Tetra Tech followed the work plan approved by the Water Board and EPA.
- Mr. Moss stated since TCE is on property that the Army owns if the Army is responsible for groundwater remediation if another responsible party cannot be found. Robert Rowden (AEC) introduced himself and responded the issue is not resolved. The Army has not found any on-site sources and is not party to a Federal Facility Agreement (FFA). Previous investigations have concluded the same. Don Chuck (NASA) said that NASA believes there is an on-site source.
- Mr. Strauss said that he would have liked a copy of the draft SSI Report in advance of this RAB meeting. Mr. Rowden said the Army will take that request into consideration for the future. The Army has multiple reviews (including legal and Public Affairs Office reviews) and receives comments from the regulatory agencies before final documents are released. This process is according to Army procedures and policy and is why the RAB has not seen this document. Mr. Berry said EPA already posted a copy of this draft report on its website, making it available to the public. This statement was confirmed by Alana Lee (EPA). Mr. Rowden stated he was not aware that it was available on the website. Mr. Berry said the conclusion in the draft report was not acceptable to the RAB. Mr. Rowden stated the Army will consider this matter further.
- Mr. Strauss asked if there are multiple sources of TCE. He questioned evidence that the source of all contamination on Orion Park is from off site. He said there are methods (such as isotope or carbon analysis) to distinguish between local (on-site) sources and off-site sources. Mr. Rowden responded that the Army cannot investigate other properties and can only investigate Orion Park. He said the Army is responsible for the current conditions on site, will mitigate any vapor intrusion, and implement land use controls.

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- Mr. Strauss said his understanding is that if there is contamination at the site, the landowner of Orion Park is responsible for the cleanup. Mr. Strauss expressed concern that the contamination will spread and cost NASA more to remediate downstream than if cleaned up at the source. Steve Sprugasci (RAB member) asked if, since there is no FFA with the Army and the regulatory agencies, that could be a loophole for the Army. Mr. Chuck explained there was an FFA with the Navy for Orion Park but the property was subsequently transferred to the Army.
- Mr. Strauss asked if measuring conductivity is an approved and widely used scientific method and if the document was properly screened. Ms. Wells said that the methods used are standard and are used in the industry for screening investigations.
- Mr. Siegel stated that public participation is effective only when draft documents are made available to the community. He thanked the EPA for posting the document, but added that the community needed more time to review to adequately comment on it before this meeting.
- Mr. Siegel questioned the technical methodology outlined in the document and does not feel it adequately demonstrates that there are no on-site sources of contamination. He stated it is in the best interest of all stakeholders that the contamination be cleaned up before it spreads further.
- Mr. Siegel suggested that the Army sign an FFA with EPA. He proposed a two-part resolution to the RAB, which he suggested the board document in a letter: (1) suggest the EPA reject the conclusions in the draft report, and (2) suggest the EPA enforce some kind of FFA to clean up the contamination.
- Arthur Schwartz said it is in violation of the law to not issue a draft document for public review. Mr. Rowden replied that he will let legal staff address that concern; however, this document is a voluntary SSI, not a remedial report. Ms. Wells added that documents submitted to the Water Board are available to the public but may not necessarily be on GeoTracker. Mr. Sprugasci stated that Mr. Rowden needs to get back to the RAB about what the Army will do in terms of releasing documents to the public.
- Mr. Rowden said comments have not been received from the regulatory agencies on the draft document and welcomed the comments. Ms. Wells replied that Agency comments are almost complete and once finalized, the Agencies will provide a copy of the comments to the RAB co-chair.
- Mr. Sprugasci repeated Mr. Siegel's two-part resolution stated above, which is the rejection of the conclusion of the draft SSI report stating no further action is necessary and the site be closed, and that the Agencies ensure this property is covered by an FFA. The resolution was carried by the RAB.

EPA UPDATE ON HIGHWAY 101 AND MOFFETT BOULEVARD STUDY AREA

Ms. Lee presented an update on the EPA's groundwater investigations in 2005 and 2011 at the Highway 101 and Moffett Boulevard Study Area.

- Mr. Sprugasci asked about the highest concentrations in the area in 2005. Ms. Wells responded that TCE was found at 400 - 500 micrograms per liter (ug/L) in the shallow A1 aquifer zone, and 700 - 800 ug/L in the A2 aquifer zone. Mr. Sprugasci asked if those were high concentrations. Ms. Wells replied that the groundwater cleanup level for TCE is 5 ug/L.
- Mr. Siegel asked if Ms. Lee was referring to TCE or tetrachloroethene (PCE). Ms. Lee responded that the primary chemical of concern is TCE but high concentrations of cis-1,2 dichloroethene (DCE) found (which is a degradation product of TCE and PCE) have been found. She said there is a dry cleaner on Leong Drive, but high concentrations of PCE have not been found in the area or on Orion Park.
- Mr. Sprugasci asked if there was a gas station in the area. Ms. Lee responded that there was a gas station at 830 Leong Drive.

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- Mr. Sprugasci asked if they were looking for sources. Ms. Lee stated that the Agencies acknowledge that contamination is coming onto the Orion Park property and EPA has conducted investigation.
- Mr. Sprugasci asked if there is a way to determine if it is a source or if it has migrated from another location if there is a high concentration. Ms. Lee responded that high concentrations on the Leong Drive properties were encountered at approximately 20 feet below ground surface, which could indicate a release there. Mr. Sprugasci asked if a single disposal of oil could cause these levels. Ms. Lee replied that it could have been a single release of TCE at a specific location, but it still would not explain the extent of contamination found at Orion Park. Ms. Wells added that about a tablespoon of TCE in an Olympic-sized swimming pool would raise the TCE concentration to the cleanup level of 5 ug/L. The highest concentrations were found on land that was used for agriculture until the 1970s, and then as a parking area for a motel and former restaurant. Mr. Chuck added that there was a gas station on the site and perhaps an auto repair facility but it is difficult to tell from the historical aerial photos. Ms. Lee added that the gas station was not exactly where the highest concentrations were found.
- Mr. Siegel asked about the discrepancy in concentrations between sampling points (high concentrations in one location and reduced concentrations in nearby locations) and how there must be a secondary source. Ms. Wells emphasized that the scale of the map needs to be considered in drawing conclusions or inferences from the map and data.
- Mr. Siegel asked if anyone has compared the ratios of contamination degradation to identify the source. Ms. Lee said EPA is currently looking at that question. In some locations, the cis-1,2-DCE concentrations are higher than the TCE concentrations and the TCE/DCE ratios at various locations differ, which is prompting EPA to take a closer look at whether the TCE/DCE ratio can help differentiate and identify discrete potential source areas and the extent of contamination from those potential source areas. The membrane interface probe (MIP) testing does not differentiate between TCE and DCE.
- Ms. Ellis asked whether the Army should investigate a different type of testing. Ms. Lee acknowledged that there may be data gaps in the Army's sampling and the Army may need to look into other types of testing and how to address the data gaps.
- Mr. Sprugasci said that since it is unlikely that a responsible party will be found, he asked what EPA will do. Ms. Lee responded that since the Highway 101 and Moffett Blvd Area has not been identified as part of a Superfund site; EPA will continue to work with the State to determine the appropriate course of action. Ms. Wells said that as Mr. Moss stated earlier in the meeting, if a responsible party is not identified, the current landowner is responsible for cleanup.
- Mr. Chuck said that NASA installed an air-sparge soil vapor extraction system along the border between NASA property and Orion Park. It works well but TCE is still migrating around it. The system is expensive and the funding may be lost for this system. He emphasized that the possible loss of funding makes this matter more urgent.
- Mr. Strauss asked if it is worthwhile to do an isotope study and share the sample results with the Army, which could demonstrate more than one source of contamination. Ms. Lee replied that the EPA is working on making its data available, but is not performing an isotope study. Mr. Chuck emphasized that in his opinion a previous isotope study conducted by the Navy was not analyzed correctly. Mr. Chuck reviewed the data again and the data are scattered; he does not think an isotope study is useful.
- Mr. Siegel asked if there is more DCE than TCE, then is the level of natural attenuation greater than in other plumes and what could cause that. Ms. Lee said she does not have enough data to answer that question.

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- A community member asked if the EPA did a soil gas analysis. Ms. Lee responded that soil gas was not analyzed.

PUBLIC COMMENT / QUESTION PERIOD

Mr. Anderson opened the meeting for questions or comments from the public.

- A community member asked EPA if there are documented cases where contamination migrates downgradient but the highest concentration is in the downgradient area. He asked for an example. Ms. Lee is not aware of an example. She stated that EPA acknowledges there is upgradient contamination. She said the Army's recent investigation did not identify the off-site source.
- A community member asked that the agenda not be switched at the beginning of the RAB meeting because attendees arrive at different times based on the established agenda. People may miss the item they wanted to hear and comment on. Mr. Anderson apologized and explained the agenda was switched at the request of EPA.
- A suggestion was made that the NASA and Hangar 1 updates be coordinated and connected together for future RAB meetings.

Future RAB Meetings

Mr. Anderson said that the next scheduled RAB meeting will be on May 10, 2012. The tentative schedule for RAB meetings in 2012 is:

- May 10, 2012
- August 9, 2012
- November 8, 2012

Mr. Anderson said that the Navy will be providing presentations on Hangar 1 and Site 25 at the next RAB meeting. He welcomed input for topics for future RAB meetings.

Adjourn

The meeting was adjourned, and Mr. Anderson thanked all present for attending. Mr. Anderson said he would be contacting the RAB regarding tour dates for March 2012.

The Navy can be contacted with any comments or questions:

- Mr. Scott Anderson
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ACRONYM LIST

- AMEC — AMEC Environmental
- BRAC — Base Realignment and Closure
- CD — Compact disc
- DCE — Dichloroethene
- EATS — East-side Aquifer Treatment System
- ECD — Electron Capture Detector
- EPA — U.S. Environmental Protection Agency
- FFA — Federal Facilities Agreement
- MCL — Maximum Contaminant Level
- MIP — Membrane Interface Probe
- NAS — Naval Air Station
- NASA — National Aeronautics and Space Administration
- PCB—Polychlorinated Biphenyls
- PCE — Tetrachloroethene
- RAB — Restoration Advisory Board
- ROICC — Resident officer in charge of construction
- SSI — Supplemental Site Investigation
- TCE — Trichloroethene

RAB meeting minutes are posted on the Navy's environmental Web page at:

<http://www.bracpmo.navy.mil/basepage.aspx?baseid=52&state=California&name=moffett>

Respectfully Submitted,

Scott Anderson
Navy Co-Chair,
Former NAS Moffett Field RAB