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**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, 18 November 2010, at the Senior Center in Mountain View, California.

**Community RAB Members in attendance:**

Bill Berry, Gabriel Diaconescu, Linda Ellis, Patricia Guerrieri, Libby Lucas, Stewart McGee, Diane Minasian, Arthur Schwartz, Lenny Siegel, Steve Sprugasci, Peter Strauss, Dan Wallace, and Steve Williams

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

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

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

Bryce Bartelma (Navy), Kevin Bricknell (Tetra Tech EM Inc. [Tetra Tech]) Laura Caballero (Army Reserves) Lauren Cason (Sealaska Environmental), Don Chuck (NASA), Dr. Ann Clarke (NASA), Wilson Doctor (Navy), Deborah Feng (NASA), Gaelle Glickfield (Army Reserves), Valerie Harris (Navy), Neil Hey (Shaw Group Inc.), Mark T. Hightower (NASA), Carolyn Hunter (Tetra Tech), Dan Leigh (Shaw Group Inc.), Gary Martin (NASA), Mike Mewhinney (NASA), Michael Moeller (Army-Fort Hunter Liggett), George Sloup (NASA), Kelly Stater (American Integrated Systems), Keith Siuda (NASA), and Dayna Yocum (Tetra Tech).

**Other Community Members in attendance:**

Roderick Bersamina (representative from Congresswoman Anna Eshoo's Office), Truman Cross (Oakland Cloud Dusters), Larry Ellis, Renato Frota (Space for Progress), Angela Liang, Georgina Hymes, John Lilikala (Space for Progress), Mindy Karardu (CNBC), Jack Nadeau (Save Hangar 1), Mark Peaslee, Denley Rafferty, Diana Samuels (*Daily News*), Jeff Segall, Amalie Sinclair (Space for Progress), Brian Schmidt (Coalition for Green Foothills), Terry Terman, Jane Wells (CNBC), Lou Young (Oakland Cloud Dusters), and Jean Young (Oakland Cloud Dusters).

**WELCOME**

Bill Berry (RAB community co-chair) and Scott Anderson (U.S. Navy Base Realignment and Closure [BRAC] Environmental Coordinator [BEC]) opened the meeting at 7:00 p.m. and welcomed everyone in attendance. Mr. Berry reviewed the agenda and noted the agenda is full and that the RAB will need to stay on track to complete all of the items by 9:10 p.m.

**APPROVAL OF MEETING MINUTES**

Mr. Anderson asked for corrections/comments to the 9 September 2010 meeting minutes. The RAB voted to finalize the 9 September 2010 meeting minutes. Meeting minutes are posted to the former NAS Moffett Field project website at: <http://www.bracpmo.navy.mil/basepage.aspx?baseid=52&state=California&name=moffett>.

**DOCUMENTS FOR REVIEW**

Documents are available in CD-ROM format. Sign-up sheets for the documents listed below were circulated during the meeting to the RAB members.

| <u>#</u> | <u>DOCUMENT</u>  | <u>APPROXIMATE<br/>SUBMITTAL<br/>DATE</u> |
|----------|--|---|
| 1.       | Site 26 Eastside Aquifer Treatment System Final Pilot Test Technical Memorandum                                    | December 2010                             |
| 2.       | Final Sampling and Analysis Plan (SAP) for Groundwater Monitoring at Installation Restoration (IR) Sites 26 and 28 | December 2010                             |

**ANNOUNCEMENTS**

Mr. Anderson said the Navy is continuing the asbestos abatement and interior room demolition at Site 29 (Hangar 1). The Navy is 60 percent complete with the asbestos abatement and 40 percent complete with demolition of the interior room. Mr. Anderson said the Navy began the basewide groundwater sampling at former NAS Moffett Field on 18 November 2010. The Navy will measure the water level in over 400 groundwater wells and will sample over 100 wells in November 2010.

- RAB member Arthur Schwartz asked if the RAB members can view the Hangar 1 activities. Mr. Anderson said that Hangar 1 is sealed off for the asbestos abatement because of the hazards of exposure to airborne asbestos. Mr. Anderson said he will ask the Navy's contractor if there will be a future opportunity for the RAB to visit Hangar 1 to observe the removal action.

**NASA UPDATE**

Deborah Feng (NASA) said that NASA issued a request for information (RFI) to solicit input for re-siding material, the technical approach, and the cost to re-skin the hangar. NASA received three partial responses to the RFI. This RFI was issued to solicit information before NASA issues a request for proposal (RFP) for the work. Ms. Feng said that NASA issued a statement to the *Mountain View Voice* the afternoon of the meeting that announced that NASA has committed \$20 million for re-siding the hangar. NASA is anticipating that Congresswoman Anna Eshoo will be able to secure an additional \$10 million to assist in the re-siding costs. A total of \$30 million will be sufficient to make the hangar a watertight building.

Ms. Feng said NASA has been coordinating with the State Historic Preservation Office (SHPO) to discuss historical artifacts in the hangar.

- RAB member Linda Ellis said that the Hangar 1 RAB Subcommittee met with SHPO and toured the cork room. The structure of the cork room will be saved for future use. Ms. Ellis said that SHPO confirmed it would prefer to see the hangar re-sided with metal similar to the current siding instead of a fabric.
- Ms. Ellis asked for a status update on saving the hangar windows. Ms. Feng said that it is NASA's responsibility to restore and reuse the hangar. NASA has met with a number of public and private groups interested in hangar reuse. NASA does not currently have additional funding to save all of the hangar windows, however. The proposed budget of \$30 million is only to make the hangar a re-sided, watertight facility.

Ms. Feng said NASA is conducting demolition work at former NAS Moffett Field and is renovating by replacement. If a new structure is needed, NASA will need to demolish an existing structure. Currently, NASA

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is demolishing Building 232 and a number of small structures in the area. The demolition sites are fenced off, and hazardous material will be taken off site to an appropriate treatment or disposal facility.

Ms. Feng said that NASA has finalized the list of items to be preserved from the hangar with the \$75,000 the Navy set aside in its contract. NASA will preserve additional items, including the cell room, overhead rack, metal frame room, man cranes, elevator rails and elevator cable. NASA does not plan to save the window putty or scaffolding.

- RAB member Steve Williams asked if NASA's RFI requested costs associated with saving the windows as part of the re-siding. Ms. Feng said that there will need to be provisions to save the windows before the hangar is re-sided. SHPO told NASA that the windows in the new hangar will need to be similar in appearance to the old ones. The funding for re-siding the hangar will not cover a full rescaling renovation of the facility.
- RAB member Peter Strauss asked if the window putty will be saved. Ms. Feng said that NASA will not save the window putty.
- RAB member Lenny Siegel thanked NASA for its commitment to save the hangar and stated that the community needs to support NASA's effort to save and reuse the hangar. Ms. Feng said that the community's interest and the support of Congresswoman Eshoo were instrumental in securing funding to re-side the hangar.
- RAB member Gabriel Diaconescu said that he heard that former NAS Moffett Field is being considered as a future location of the World's Fair in 2020. However, there is an issue with the United States (U.S.) withdrawal from the Bureau of International Expositions. The U.S. will need to become a member of the Bureau of International Expositions before former NAS Moffett Field can be considered as a potential location for the World's Fair in 2020. NASA supports submitting a proposal to host the World's Fair in 2020 and will need to work with the surrounding communities and industries to complete it.
- Mr. Schwartz said there is concern that the airways that are currently leased at former NAS Moffett Field would not be accessible during the World's Fair.
- RAB member Libby Lucas said she is concerned that former NAS Moffett Field may not be large enough to host a World's Fair.

## REGULATORY AGENCY UPDATE

### San Francisco Bay Regional Water Quality Control Board (Water Board)

Elizabeth Wells (Water Board) said that the San Francisco Estuary Institute and Water Board work collectively to collect samples from San Francisco Bay under the Regional Monitoring Program. The monitoring results are available for review in *The Pulse of the Estuary 2010*. Ms. Wells will provide an update of the monitoring results at the 13 January 2011 RAB meeting.

### U.S. Environmental Protection Agency

Alana Lee (EPA) said that Sarah Kloss (EPA) could not attend the RAB meeting and provided the following update to the RAB on polychlorinated biphenyls (PCBs) in caulk.

In October 2010, Ms. Kloss met with EPA Region 9's PCBs Coordinator to discuss PCBs in caulk. From the meeting, we learned that demolition and disposal of buildings with PCBs in caulk above certain regulatory levels of 50 parts per million is regulated under Toxic Substances Control Act (TSCA). EPA will work with NASA to ensure that NASA samples for PCBs during demolition of buildings that were built during the timeframe 1950-1978 when PCB caulk was used. Buildings built after 1978 do not contain PCBs in caulk. PCBs in caulk for existing buildings (not planned for demolition) is an emerging issue. As Lenny Siegel pointed out, EPA has started looking at PCBs in caulk in schools. We are still gathering information on this issue and determining appropriate next steps and will continue to update the RAB. The RAB can get more information at [www.epa.gov/pcbaincaulk](http://www.epa.gov/pcbaincaulk).

## **EPA REGIONAL GROUNDWATER AND VAPOR INTRUSION UPDATE**

Ms. Lee provided a presentation on EPA's regional groundwater program and vapor intrusion update. Ms. Lee discussed the extent of the regional groundwater contamination plume and the cleanup progress made over the last 20 years. Ms. Lee said that on 18 November 2010, as part of the Middlefield-Ellis-Whisman (MEW), Navy, NASA semi-annual "Black Thursday" event, water-level measurements of nearly 1,000 groundwater monitoring wells in the area are collected on the third Thursday of March and November. In addition, more than 500 monitoring wells are sampled annually in November and December. Through 2009, more than 4.5 billion gallons of trichloroethene (TCE) contaminated groundwater have been treated and over 95,000 pounds of volatile organic compounds (VOCs) have been removed from the regional groundwater plume.

However, EPA's Second Five-year Review in September 2009 identified the following groundwater issues: (1) contaminant mass removal efficiency is decreasing, (2) the existing groundwater extraction and treatment remedy is not expected to meet groundwater cleanup for many more decades, and (3) potential source areas in the former Building 88 area and associated sewer lines, well W9-18 area, and Traffic Island Area on Moffett Field were identified. EPA's recommended follow-up actions include: Prepare Site-wide Groundwater Feasibility Study to evaluate alternative technologies to effectively expedite groundwater cleanup and evaluate cleanup alternatives to effectively meet new remedial action objective in Vapor Intrusion Record of Decision (ROD) Amendment, evaluate applicability and implement pilot treatability studies in different representative source and dissolved plume areas, and implement optimization plans to improve effectiveness of groundwater remedy.

EPA will lead the development of the Site-wide Groundwater Feasibility Study (FS) for the MEW Study Area, in conjunction with the Navy, NASA, and MEW parties. Ms. Lee said that EPA will provide regular updates on the FS and will seek public input from the community, including the RAB, the MEW Community Advisory Board (CAB), the City of Mountain View, and property owners.

In EPA's Second Five-Year Review, EPA concluded that the existing groundwater remedy is not protective of human health from the vapor intrusion pathway and that the following actions needed to be taken to ensure protectiveness: (1) finalize the Vapor Intrusion ROD Amendment (completed in August 2010), (2) complete baseline sampling and evaluation of buildings within the Vapor Intrusion Study Area, and (3) implement remedial actions on buildings, as needed. Ms. Lee presented a map of 32 commercial buildings in the MEW Area and list of 36 commercial buildings in the Moffett Field Area that are currently occupied, but have not yet been sampled. EPA issued a letter on 8 October 2010 to Navy, NASA and the MEW Parties requesting that these buildings be sampled and evaluated. NASA and the MEW Parties agreed to submit a Draft Site-wide Indoor Air Sampling and Analysis Work Plan for the un-sampled commercial buildings to EPA on 15 December 2010. The final Site-wide Indoor Air Sampling and Analysis Work Plan is expected to be approved by EPA on 24 January 2011 such that sampling will begin in February 2011. EPA continues to discuss with the Navy, NASA, and MEW Parties sampling to determine the appropriate response action tier for all commercial

buildings within the Vapor Intrusion Study Area and the work requirements to implement the vapor intrusion remedy.

- Mr. Berry asked if Building 19 will be sampled for vapor intrusion. Dr. Ann Clarke (NASA) said that NASA plans to sample Building 19 separately from the site-wide indoor air sampling program. It is not part of the immediate sampling effort described by Ms. Lee as it has been sampled recently. The purpose of the EPA sampling request is to fill data gaps for buildings that have never been sampled or that have not been sampled since 2003. NASA will be sampling Building 19 later in the spring since NASA installed a ventilation system in the basement after renovating several rooms for meeting space.
- Mr. Siegel said the CAB is interested in reviewing the Indoor Air Sampling Work Plan. Mr. Siegel said he would like information on the differentiation of Navy, NASA, and MEW responsibilities in the groundwater and indoor air sampling and agreements from all parties. Mr. Siegel said he wants to ensure that work on the groundwater plume and indoor air moves forward.
- Ms. Lucas asked if the sea level rise is a concern for the regional groundwater plume. Valerie Harris (Navy) said the groundwater plume has not been affected by sea level rise.

#### **ARMY UPDATE ON FORMER ORION PARK HOUSING AREA SUPPLEMENTAL SITE INVESTIGATION (SI) FOR GROUNDWATER**

Kelly Stater (American Integrated Services) introduced himself as the Army's contractor for the supplemental SI for groundwater at the former Orion Park Housing Area. Army lead Guy Romine was unable to attend the RAB meeting. If the RAB members have questions on the Army program, they can contact Guy Romine at [guy.romine1@us.army.mil](mailto:guy.romine1@us.army.mil) or (443) 567-1772.

Mr. Stater indicated that the former Orion Park Housing Area site is located on the southwestern portion of Moffett Field to the east of Stevens Creek and north of Highway 101. The area was primarily agricultural until multi-family housing was constructed between 1941 and 1982. TCE contamination is found in the upper (A1) and lower (A2) groundwater aquifer zones. The Army is evaluating whether there are on-site sources of TCE as there is TCE migrating onto the former Orion Park area from upgradient unidentified sources areas. Dayna Yocum (Tetra Tech) said the Army is proposing to investigate the Orion Park site using cone penetrometer test (CPT) and membrane interface probe (MIP) technology at 28 to 50 locations in the upper and lower aquifer zones. Up to nine groundwater wells may be installed at the site to further investigate any potential sources of TCE. The MIP is a tool that is used to gather real-time data on the concentrations of VOCs in the subsurface. In November 2010, the Army began Phase 1 of the investigation, which included water level measurements of the onsite and nearby monitoring wells to help determine groundwater flow direction. In addition, monitoring well sampling will take place in December 2010 in the first phase of the investigation. Phases 2, 3, and 4 will occur in January and February 2011 and will include the CPT/MIP investigation, a direct-push investigation, and groundwater well installation (if needed) and sampling. The Army will issue a draft investigation report for review in May 2011.

- Mr. Strauss said that MIP data are qualitative and not quantitative and asked if the MIP data will be used to identify specific TCE sources. Mr. Stater said that EPA discussed MIP data and the question of qualitative versus quantitative in a point paper issued in 2007. Mr. Stater said that MIPs are used to obtain real-time data. The results of the MIP data will be used to select the location of the new monitoring wells. Samples from existing and newly installed monitoring wells will also be collected where source areas are indicated. Mr. Strauss asked if the study is to determine if there are existing TCE

sources at the former Orion Park Housing Area. Mr. Stater confirmed that the data will show if there is an existing source of TCE in the area.

- Mr. Williams asked if it is possible to identify the source based on the sampling results if the TCE release is decades old. Ms. Yocum confirmed the data will be able to indicate the source of the TCE release.
- Mr. Siegel thanked the Army for its participation in the RAB meeting and for providing an update on the work conducted at the former Orion Housing Park Area. Mr. Siegel requested to be added to the Army's distribution list so he can review future documents. Mr. Siegel also said that he wants the Army to mitigate the TCE plume before it enters NASA property. Mr. Siegel said that the responsibility for contamination on and around the former NAS Moffett Field is unclear to the public. Even if a source of the contamination cannot be identified, the contamination still needs to be addressed. Ms. Wells said that the regulatory agencies are looking into the contamination on and upgradient of former NAS Moffett Field. The regulatory agencies acknowledge that there are contamination sources upgradient of former Orion Park Housing Area migrating onto Moffett Field. Ms. Lee said that EPA has some limited funds in place to conduct additional groundwater work to investigate the extent of potential upgradient source areas.
- Don Chuck (NASA) said the Army should investigate petroleum contamination at the former Orion Park Housing Area. An earlier study of the site included the Army Reserve Building, which was previously a tank farm and gas station. Mr. Chuck said the Navy has had issues in the past with collecting groundwater samples in the area to determine the flow pattern. Ms. Yocum said the Army participated in the 18 November 2010 Black Thursday water level measurement event, which included groundwater measurements at Orion Park area wells, NASA wells, and the former vector control yard property, which is located upgradient and to the south of the Orion Park area.
- Mr. Strauss said that there was a Navy stable isotope study at the Orion Park area to identify TCE sources. Much historical work was done at the site, and the Army should review the information as it will assist in identifying the TCE source.

## **SITE 28 GROUNDWATER TREATABILITY STUDY UPDATE**

Neil Hey (Shaw Group Inc.) presented information on the in situ abiotic/biotic treatability study (TS) implementation at Site 28 West-side Aquifers Treatment System (WATS) Area. The Navy developed the TS to evaluate whether the combined abiotic/biotic technologies will remove chlorinated ethenes (CE) in the groundwater at Site 28. The Navy conducted the TS in three areas of Site 28 with the highest concentrations of CE — former Building 88, the Traffic Island, and groundwater well W9-18. Stage 1 of the TS was hot spot characterization to delineate the highest concentrations of CE; this characterization was conducted in March and April 2010. A MIP was advanced to a total depth of 65 feet below ground surface at 19 locations in the Traffic Island Area, 12 locations in the former Building 88 area, and four locations in the well W9-18 area to further define the distribution of CEs in the subsurface. Stage 1 also included an assessment of dense nonaqueous-phase liquid (DNAPL) at the Traffic Island Area and former Building 88 area. Two locations at the Traffic Island Area and one location at former Building 88 area were investigated for potential DNAPL. No evidence of DNAPL was encountered. Stage 2, the treatment pilot tests, was completed in July and August 2010. The treatment pilot tests included well installation, a baseline groundwater monitoring event, substrate preparation and injection, and post-injection performance monitoring. The pilot tests also included an injection of a naturally occurring microbe that is native to California at the Traffic Island Area and Building 88 area. Five

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post-injection performance monitoring events are planned for August and November 2010, and late January, mid-April, and late June 2011 to assess the success of the pilot test.

- Mr. Strauss asked if the substrate was injected at the same time as the microbe. Mr. Anderson said that the substrate and microbe were injected separately.
- Mr. Siegel asked when the sampling results will be available for review. Mr. Hey said that it will require a month after the last round of sampling to receive all of the analytical data from the laboratory.
- Mr. Strauss said that Lawrence Livermore Laboratory is using the same type of technology and combined the injection of the substrate and microbe. Mr. Hey said that the separate injections have worked well at other Navy installations.

## **PUBLIC COMMENT PERIOD**

Mr. Anderson opened the meeting for questions or comments from the members of the public. No public comments were provided.

## **Future RAB Topics**

Mr. Anderson announced the next RAB meeting will tentatively be held on 13 January 2011. The RAB discussed the following items as potential topics for future meetings:

- Hangar 1 Removal Action Update
- Interagency Agreements
- Site 14 Update

## **Adjourn**

The meeting was adjourned at 9:10 p.m., and Mr. Anderson thanked all present for attending. Mr. Anderson can be contacted with any comments or questions:

- Mr. Scott Anderson  
BRAC Environmental Coordinator, Former NAS Moffett Field, BRAC PMO West;  
1455 Frazee Road, Suite 900, San Diego, CA 92108; Phone: 619-532-0938; Fax: 619-532-0940;  
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**ACRONYM LIST**

BEC – BRAC Environmental Coordinator  
BRAC – Base Realignment and Closure  
CAB – Community Advisory Board  
CE – Chlorinated ethenes  
CPT – Cone penetrometer test  
DNAPL – Dense nonaqueous-phase liquid  
EPA – U.S. Environmental Protection Agency  
FS – Feasibility study  
IR – Installation Restoration  
MEW – Middlefield-Ellis-Whisman  
MIP – Membrane interface probe  
NAS – Naval Air Station  
NASA – National Aeronautics and Space Administration  
PCB – Polychlorinated biphenyl  
RAB – Restoration Advisory Board  
RFI – Request for information  
RFP – Request for proposal  
RPM – Remedial Project Manager  
SHPO - State Historic Preservation Office  
SI – Site investigation  
TCE – Trichloroethene  
TS – Treatability study  
TSCA – Toxic Substances Control Act  
VOC – Volatile organic compound  
Water Board – San Francisco Bay Regional Water Quality Control Board

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