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Ser 6421/8122  
April 15, 1998

Dear RAB Member:

The Moffett Federal Airfield (MFA) Base Closure Team and the Community Co-Chair wish to invite you to attend our next Restoration Advisory Board (RAB) meeting. Your attendance is especially important since we will be discussing new RAB memberships and will be soliciting for a new Community Co-Chair.

Ms. Cathrene Glick reminded the members in March's RAB meeting that her year as Co-Chair was ending and that it was time to elect a new Community Co-Chair. The RAB, thus, will be soliciting nominations for a new Co-chair in May's RAB meeting. If you are interested in being the Community Co-Chair, please bring with you a short paragraph of your qualifications.

Our last RAB meeting was held on March 12, 1998 at the Mountain View Senior Center in Mountain View, California. The meeting summary is provided as enclosure (1). Although there will be no meeting in April, our **next RAB meeting** will be held on **May 14, 1998** at the **Mountain View Senior Center**. The meeting will begin at 7:00 p.m. The agenda for the meeting is as follows:

7:00-7:05 PM Meeting Overview  
7:05-7:10 PM March Minutes Approval  
7:10-7:40 PM Remedial Project Managers Meeting Report  
7:40-7:50 PM Subcommittee Reports  
7:50-8:00 PM Site 22 Field Work Update Presentation  
8:00-8:20 PM Remedial Action Construction Update Presentation  
8:20-8:35 PM New RAB Memberships  
8:35-8:55 PM Community Co-Chair Solicitation  
8:55-9:00 PM Agenda/Schedule for the Next RAB Meeting

If you have any questions or comments, please contact me at (415) 244-2563, Mr. Hubert Chan of this office at (415) 244-2562, or Ms. Cathrene Glick, Moffett's Community Co-Chair, at (408) 987-0210.

Sincerely,

STEPHEN CHAO  
BRAC Environmental Coordinator  
Moffett Federal Airfield

Distribution:  
Moffett Federal Airfield RAB Members  
Karen Huggins, ARC Ecology/ARMS Control Research Center  
Eric Ortega, Onizuka Air Station

Moffett RAB Members:

Ann	Coombs	Alternate Member
Russ	Frazer	Alternate Member
Kevin	Woodhouse	Alternate Member
Stewart	McGee	Alternate Member
Maurice	Ancher	Community Member
John	Beck	Community Member
Robert	Davis	Community Member
Cathrene	Glick	Community Member
John	Gurley	Community Member
Paul	Lesti	Community Member
Bob	Moss	Community Member
Edwin	Pabst	Community Member
Richard	Schuster	Community Member
Lenny	Siegel	Community Member, Pacific Studies Center
Ted	Smith	Community Member, Silicon Valley Toxics Coalition
Steve	Sprugasci	Community Member
Robert	Strena	Community Member
Mary	Vrabel	Community Member
Rosemary	Stasek	Community Member, Mountain View Representative
Jack	Walker	Community Member, Sunnyvale Representative
James	McClure	MEW Representative
Sandra	Olliges	NASA Representative
Steve	Chin	Regulatory Member
Joseph	Chou	Regulatory Member
Scott	Flint	Regulatory Member
Michael	Gill	Regulatory Member
Jim	Haas	Regulatory Member
Loren	Henning	Regulatory Member
Bob	Holston	Regulatory Member
Thomas	Iwamura	Regulatory Member
Joyce	Whiten	Regulatory Member
Peter	Strauss	Silicon Valley Toxics Coalition TAG Consultant

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Blind copy to:  
10A, 642, 6421, 6422, 6423, 6426, 09CMN, 60B  
Tetra Tech EMI (Attn: Tim Mower)  
Montgomery Watson (Attn: Kim Walsh)  
NFESC (Attn: Maurcen Little)  
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**MOFFETT FEDERAL AIRFIELD  
RESTORATION ADVISORY BOARD MEETING**

**MINUTES**

**CITY OF MOUNTAIN VIEW  
SENIOR CENTER  
266 Escuela Street  
Mountain View, California 94041**

**THURSDAY, MARCH 12, 1998**

**I. INTRODUCTION AND MEETING OVERVIEW**

Mr. Stephen Chao, Navy co-chair, opened the meeting of the Moffett Federal Airfield (MFA) restoration advisory board (RAB) at 7:10 p.m. Mr. Chao reviewed the following agenda items for this meeting:

- Minutes approval
- Remedial project managers (RPM) meeting report
- Committee reports
- Presentation: "National Aeronautics and Space Administration (NASA) Cleanup and Investigations"
- Discussion: "NASA Cleanup and Investigations"
- Agenda and schedule for next RAB meeting

**II. MINUTES APPROVAL**

Mr. Chao solicited comments on the minutes of the January 15, 1998, RAB meeting. Ms. Leslie Byster, Silicon Valley Toxics Coalition (SVTC), asked whether the technical, historical, and educational (THE) committee had submitted comments on the draft Site 22 feasibility study (FS) report as suggested in the minutes. Dr. Jim McClure, Harding Lawson Associates and consultant to the Middlefield-Ellis-Whisman (MEW) companies, responded that the committee had not provided comments. There were no other comments and the minutes were approved without correction.

**III. RPM MEETING REPORT**

Mr. Michael Gill, U.S. Environmental Protection Agency (EPA), provided a report of the RPM meetings held on February 11 and March 11, 1998. Mr. Gill reported on action items currently in progress. He stated that agreements between NASA and the MEW companies and the Navy and the MEW companies are in progress. These two agreements allocate responsibilities for cleanup and monitoring of portions of the regional volatile organic compound (VOC) plume on the western side of MFA. The agreements are substantially completed but not yet signed. Mr. Gill also reported that an off-site property, NAVAir Manor, formerly attached to MFA, had been sold to the City of Sunnyvale in January 1998. The 10.5-acre property sold for approximately \$6 million and represents the first transfer of MFA property to a nonfederal agency.

Mr. Gill reported on recent field activities. He said that the Site 9 source control measure treatment system was still operating and treating water from the storm drain system. Water currently bypasses the air

stripper because a transfer pump controller had broken down and instead is treated directly through the granular activated carbon beds. The west-side aquifers treatment system (WATS) is expected to take over treatment of the storm drain water in July 1998. Battelle continues to analyze core samples from the iron matrix at the Iron Curtain pilot test for evidence of precipitates and plugging. A report is expected soon. Mr. Gill reported that the Navy measured water elevations in wells across the station in February 1998 as part of the quarterly sampling program, although no wells were sampled this quarter. The Navy also prepared a work plan for laboratory testing to support the sodium dithionite pilot test. This technology, also known as in situ redox manipulation (ISRM), changes the oxidation state of native iron in the aquifer to create a treatment zone similar to the Iron Curtain. Mr. Gill stated that the Navy was meeting with the shallow seismic reflection survey subcontractor on March 24, 1998 and that the final project report was scheduled to be submitted soon. He said that the regulatory agencies had provided comments on the draft Site 22 FS report and the revised draft final stationwide FS report, as well as on various groundwater monitoring plans for the operable unit 1 (OU1) landfills.

Mr. Gill reported that construction at OU1 continues on hold due to the rainy weather and is approximately 95 percent complete. Tasks remaining at Site 1 include installation of rip rap along the perimeter road adjacent to the stormwater retention pond, placement of gravel on the perimeter road surface, and installation of one gas monitoring well and 15 gas vents. Remaining tasks at Site 2 include minor grading and installation of a storm drain inlet. Grass is growing at both sites from the hydroseeding completed in November 1997.

Mr. Gill stated that regulatory agency comments on the draft Site 22 FS report included several requests for additional information about the Site 22 landfill. He said that the Navy proposed to conduct additional field investigations to address these concerns. Trenching to more accurately locate the boundaries of the landfill will be a primary task during this field work. A draft work plan proposing the additional investigations was submitted by the Navy on March 4, 1998. Mr. Gill reported that the regulatory agencies agreed that the field work should be conducted before the draft final Site 22 FS report is submitted.

Mr. Gill said that the agencies and the Navy discussed the comments on the stationwide FS. EPA comments focus on including additional alternatives that show a wider range of potential cleanup areas and a larger range of potential ecological effects. Mr. Peter Strauss, Strauss Associates and consultant to SVTC, asked whether the RAB's comments during the January meeting were discussed at the RPM meeting. Mr. Chao replied that the Navy had discussed the RAB's concerns informally with the regulators, but that they had not yet reached resolution on all the issues. Mr. Joseph Chou, Regional Water Quality Control Board (RWQCB), San Francisco Bay Region, added that the California Department of Fish and Game planned to submit comments on the stationwide FS report by March 20, 1998. Mr. Gill continued his report by stating that another EPA comment on the stationwide FS report was that all risks, even those due to background concentrations, should be presented so that the risk managers could make appropriate decisions. He added that he agreed with the analysis in the FS report indicating that the metals were naturally occurring, but stated that the risks should be presented in the report.

Mr. Gill reported that the regulators toured the sites of the WATS and the east-side aquifer treatment system (EATS). He said that the treatment equipment was on site and that the system installations were progressing. Startup of both systems is scheduled for July 1998. WATS has a design capacity of about 120 gallons per minute (gpm) and is expected to operate at approximately 70 gpm. EATS is expected to operate at 30 to 40 gpm. Mr. Chao added that he could arrange for a RAB tour of the systems if there was enough interest.

#### IV. COMMITTEE REPORTS

Dr. McClure reported that the THE committee met on February 11 and March 11, 1998. Dr. McClure said that the committee discussed the general approach to the stationwide FS and the presentation of the information in the sitewide ecological assessment. The committee encourages the Navy to spend a significant amount of time on the presentation of this information because much time could be lost if the data presentation, and especially the risk management decisions, are not clear. Dr. McClure added that the committee would support the Navy as needed to secure additional resources for presentation and communication of the ecological assessment issues and decisions. Dr. McClure noted that the committee distributed several documents including the revised draft final stationwide FS report and responses to comments, the final WATS long-term groundwater monitoring plan, the draft Site 22 FS report, the draft additional Site 22 investigation field work plan, and OUI landfill monitoring and maintenance reports.

Mr. Strauss asked whether the THE committee planned to provide comments on the stationwide FS report. Dr. McClure responded that the committee did not plan to submit comments and that the THE committee's major concern was communication rather than the specific results. Ms. Cathrene Glick, Geoplexus and community co-chair, added that the committee had discussed the Site 22 FS report at the January 1998 meeting and had requested collection of a new round of groundwater samples since the existing groundwater data are 3 to 4 years old. Ms. Glick said that the committee also discussed the landfill settlement analysis presented in the Site 1 closure report. The report should also evaluate the potential for lateral spreading and basal failure of sand lenses beneath the landfill during an earthquake.

## V. NASA CLEANUP AND INVESTIGATIONS PRESENTATION AND DISCUSSION

Ms. Sandy Olliges, NASA, presented a summary of NASA's cleanup and investigation activities. As an overview, Ms. Olliges stated that her presentation would provide the status of activities at each of NASA's 12 areas of investigation (AOIs) as well as discuss cleanup levels for polychlorinated biphenyls (PCBs) and the AOI 4 removal action work plan (RAW). She added that the NASA property is not a Superfund site. The eastern part of NASA property overlies the regional VOC groundwater plume, and oversight of cleanup activities in this part of NASA property is conducted by EPA. The remainder of NASA is regulated under a voluntary agreement with the California EPA, Department of Toxic Substances Control (DTSC).

Ms. Olliges provided an information package that contained a summary of activities at each of the 12 AOIs. During the discussion of AOI 1, the fuel farm, Mr. Paul Lesti, community member, asked what groundwater cleanup level was used for jet fuel. Ms. Olliges responded that this level was 700 micrograms per liter. During the discussion of AOI 6, the former Lindbergh Avenue storm channel, Mr. Strauss asked whether individual PCB congeners had been evaluated. Ms. Olliges replied that specific congeners had not been analyzed.

Ms. Olliges discussed NASA cleanup levels and also referred members to the handout information. NASA has adopted the cleanup levels for fuel-related compounds already accepted by the Navy and the regulators. NASA has adopted the VOC cleanup levels stated in the MEW record of decision. NASA has coordinated with DTSC to set cleanup levels for PCBs and recently received a response from DTSC. PCB cleanup levels will be 25 to 50 parts per million (ppm) for restricted areas and 1 ppm for unrestricted areas. NASA will adopt the PCB cleanup levels set in the stationwide FS for ecological areas. In restricted areas, the area will be considered clean if PCB concentrations are below 25 ppm; signs must be posted if concentrations are present between 25 and 50 ppm. In unrestricted areas, the PCB concentration must average 1 ppm but may be as high as 2 ppm. PCB concentrations may be up to 10 ppm at depths greater than 10 inches or beneath pavement in unrestricted areas.

Mr. Strauss asked how the restricted areas would be maintained if the property were transferred. Ms. Olliges replied that some kind of institutional control would be necessary. Dr. McClure asked for the DTSC contact that provided the PCB guidance. Ms. Olliges said that Mr. Derek Whitworth was the contact. She added that NASA was working with Mr. Whitworth to select appropriate actions for sites where PCB concentrations exceed these cleanup levels. Dr. McClure asked whether unrestricted use implies that residential use is acceptable. Ms. Olliges responded that unrestricted use would allow residential use. Dr. McClure asked whether residential use would also apply to the paved areas or for soils deeper than 10 inches. Ms. Olliges replied that institutional controls would probably be necessary for these areas to be suitable for residential use because restrictions would have to be applied to prevent disturbance of soil beneath pavement or deeper than 10 inches.

Ms. Byster asked if the PCB sources were known. Ms. Olliges responded that spills related to PCB-bearing transformers and capacitors were potential sources. She noted that NASA maintains numerous PCB-bearing devices that are carefully managed. Mr. Strauss asked whether the work for the stationwide FS will set PCB cleanup levels for groundwater. Mr. Gill replied that the stationwide FS will set PCB cleanup levels only for sediments. Mr. Strauss asked whether NASA also tested PCB-contaminated areas for dioxins and furans. Ms. Olliges responded that NASA would test for these compounds if additional sampling is required at AOIs 4 and 5.

Ms. Olliges referred to the information package and summarized the AOI 4 RAW. The removal action for fuel-related contamination will remove contaminated soil and monitor groundwater while natural processes degrade contaminants in groundwater. NASA will provide an addendum to the RAW to address trichloroethene (TCE) contamination recently discovered at AOI 4. Mr. Strauss asked how much time would be required for active groundwater remediation of fuel-related contamination at AOI 4. Ms. Olliges replied that NASA estimated that active remediation by pumping and treating the groundwater would require as long as natural attenuation. Mr. Strauss asked whether NASA had set a trigger level to signal the need for other actions if natural attenuation did not appear to be working. Ms. Olliges responded that NASA would evaluate the data as they became available on a case-by-case basis.

## VI. AGENDA AND SCHEDULE FOR NEXT RAB MEETING

Mr. Chao reviewed a list of upcoming documents distributed at the meeting to solicit ideas on future meeting topics and dates. Dr. McClure suggested that a presentation of Site 22 field investigation results would be useful or that a revised, clarified stationwide FS presentation, as recommended by the THE committee, could be made in May or June. Mr. Strauss asked whether the Navy had agreed to this revised presentation. Mr. Chao responded that he would consider the idea, but that the request seemed reasonable. Ms. Glick added that a presentation centered on rational, logical steps to cleanup without the more subjective issues of cost and hazard quotient (HQ) levels would be useful. Dr. McClure said that if the ecological assessment information is not presented well, the public will not understand the important information and will likely respond only emotionally. Mr. Gill suggested that correlation of HQ values to cleanup levels and explanation of potential effects on organisms may help the public understand.

Mr. Chao said that problems with ecological issues are the lack of policies to evaluate acceptable risks and the need to make decisions based on imperfect information. Mr. Strauss suggested that if no one on the RAB has problems with the stationwide cleanup plan, then he expected that the general public would also not have a problem. If the RAB can be convinced of a valid approach, then the final decision should be readily achievable since the RAB members represent diverse interests. Dr. McClure reiterated that the stationwide FS presentation must focus all the ecological analyses to provide an understanding of the

results. This presentation will not be to select a cleanup remedy but to transfer information without raising emotional, value-related issues that could obscure the entire process. Handling the more difficult issues of which organisms should be protected and to what degree can come only after everyone understands the ecological information gathered by the sitewide ecological assessment. Mr. Robert Strena, Stanford University, asked whether the RAB members generally supported the Navy's position on the stationwide FS. He added that the RAB represents the community and that the community should be advised that its interests are well represented by the RAB. If other members of the public disagree with the approach taken, they should have been involved with the RAB earlier and presented their opinions.

Mr. Chao proposed that topics for the next RAB meeting could include a summary of the field activities at Site 22 and photographs of WATS and EATS construction. Mr. Gill solicited ideas on increasing the RAB membership. Mr. Chao added that the Navy planned to advertise for new members in local newspapers in the coming months. Ms. Byster asked what process would apply for the review of new applications. Mr. Lesti responded that the applications are reviewed by the co-chairs and approved by majority vote of the RAB. Ms. Glick reminded the members that her year as co-chair was ending and that it was time to elect a new community co-chair. Mr. Chao stated that the next meeting announcement would contain a solicitation for a new community co-chair.

Mr. Chao proposed that the next meeting be scheduled for May 14, 1998, at the Mountain View senior center. He closed the meeting at 9:55 p.m.