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Scr 1843.1/7380
September 30, 1997

Dear RAB Member:

On behalf of the Moffett Federal Airfield (MFA) Base Closure Team and the Community Co-Chair, you are invited to our next Restoration Advisory Board (RAB) meeting in **October**. No meeting was scheduled for September.

Our last RAB meeting was held on August 14, 1997 at the City of Mountain View Police and Fire Auditorium in Mountain View, California. The meeting summary is provided as enclosure (1). Our next RAB meeting will again be held on the second Thursday of the month, **October 9, 1997**. It will be held at the **Mountain View Senior Center**, Mountain View, California. 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 Minutes Approval
7:10-7:40 PM Remedial Project Managers Meeting Report
7:40-7:50 PM All Parties Meeting Report
7:50-8:10 PM Subcommittees Report
8:10-8:30 PM Stationwide FS Discussion
8:30-8:45 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 my staff at (415) 244-2562, or Mr. David Glick, Moffett's Community Co-Chair, at (408) 987-0210.

Sincerely,

ORIGINAL SIGNED BY:
STEPHEN CHAO
BRAC Environmental Coordinator
Moffett Federal Airfield

Ser 1843.1/7380
September 30, 1997

Distribution:

Moffett Federal Airfield RAB Members
Karen Huggins, ARC Ecology/ARMS Control Research Center
Eric Ortega, Onizuka Air Station
Maurice Bundy, Potential RAB Member

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Moffett RAB Members:

Ann	Coombs	Alternate Member
Russ	Frazer	Alternate Member
Stewart	McGee	Alternate Member
Maurice	Ancher	Community Member
John	Beck	Community Member
Robert	Davis	Community Member
David	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
Alex	Terrazas	Community Member, Mountain View Representative (Interim)
Jack	Walker	Community Member, Sunnyvale Representative
James	McClure	MEW Representative
Sandra	Olliges	NASA Representative
Elizabeth	Adams	Regulatory Member
Steve	Chin	Regulatory Member
Joseph	Chou	Regulatory Member
Michael	Gill	Regulatory Member
Jim	Haas	Regulatory Member
Bob	Holston	Regulatory Member
Thomas	Iwamura	Regulatory Member
Michael	Martin	Regulatory Member
Michael	Rochette	Regulatory Member
Joyce	Whiten	Regulatory Member
Peter	Strauss	Silicon Valley Toxics Coalition TAG Consultant

**MOFFETT FEDERAL AIRFIELD
RESTORATION ADVISORY BOARD MEETING**

MINUTES

**CITY OF MOUNTAIN VIEW POLICE/FIRE ADMINISTRATION BUILDING
1000 Villa Street
Mountain View, California 94041**

THURSDAY, AUGUST 14, 1997

I. INTRODUCTIONS AND MEETING OVERVIEW

Mr. Stephen Chao, Navy co-chair, opened the meeting of the Moffett Federal Airfield (Moffett Field) 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
- Bay Area Defense Conversion Action Team (BADCAT) presentation
- Review of final operable unit 1 (OU1) record of decision (ROD)
- Review of final sitewide ecological assessment (SWEA)
- Agenda and schedule for next RAB meeting

II. MINUTES APPROVAL

Mr. Chao solicited comments on the minutes of the June 12, 1997 RAB meeting. There were no comments and the minutes were approved without correction.

III. RPM MEETING REPORT

Mr. Michael Rochette, California Environmental Protection Agency (Cal/EPA), San Francisco Bay Regional Water Quality Control Board (RWQCB) provided a report of the July 9, 1997, and August 13,

1997, RPM meetings held at the RWQCB offices in Oakland and the Cal/EPA Department of Toxic Substances Control (DTSC) offices in Berkeley, respectively.

Mr. Rochette reviewed action items from the previous meetings. The Navy is still waiting for a response from Dr. Lynne Trulio concerning issues related to burrowing owls. This information will be included in the stationwide feasibility study (FS). A report describing the seismic reflection survey is expected to be submitted in September 1997. Responses to U.S. Environmental Protection Agency (EPA) comments on the final quality assurance project plan (QAPP) for long-term groundwater monitoring were scheduled to be submitted to EPA during the week of August 18, 1997.

Mr. Rochette stated that the Site 9 groundwater treatment systems treated approximately 500,000 gallons during the previous month. Bromide tracer was injected at the Iron Curtain pilot test on July 29, 1997 to begin a second tracer test. This test will evaluate groundwater flow as it approaches the reaction cell. A report describing the test is scheduled to be submitted in November 1997. Mr. Rochette reported that the Navy analyzed 27 groundwater samples collected in May 1997 from petroleum-contaminated areas for methyl tertiary butyl ether (MTBE). Only one detection (estimated concentration of 0.5 micrograms per liter [(g/L)]) was observed. Mr. Peter Strauss, consultant to the Silicon Valley Toxics Coalition (SVTC), asked whether additional samples would be collected in the future. Mr. Rochette responded that future samples may be collected from areas where MTBE was detected.

Mr. Rochette reported that excavation and consolidation activities at the Site 2 landfill were proceeding and were expected to be completed near the end of August 1997. Mr. Don Chuck, Navy, stated that 27 soil samples had been collected and that results had been received for nine of the samples. He added that no detections were observed except in one area that will be reexcavated and resampled. Mr. Rochette reported that regulators from RWQCB, DTSC, and the Integrated Waste Management Board (IWMB) had observed field operations. The definitive design for the Site 1 landfill cap is scheduled to be submitted on August 18, 1997. Mr. Strauss asked why excavation activities were planned along the eastern boundary of Site 1. Mr. Rochette replied that some debris was located outside the area previously thought to contain the landfill and that this material was being excavated to move it within the footprint of the landfill.

Mr. Rochette reported that the final phase II SWEA report was submitted on July 25, 1997 and that the results from the SWEA were being incorporated into the stationwide FS. The regulators planned to meet to

discuss the implications of the SWEA on the stationwide FS. Mr. Rochette stated that construction of the west-side aquifers treatment system (WATS) had begun with the installation of the first groundwater extraction well. Location surveying for the east-side aquifer treatment system (EATS) had also started.

Mr. Rochette reported on National Aeronautics and Space Administration (NASA) activities. The pressure detection monitoring system for the fueling area is not performing as expected. NASA is working with Santa Clara County inspector Bob Holston on the problem. Polychlorinated biphenyls (PCBs) are still being detected in groundwater samples collected from wells installed at the former Lindbergh Avenue storm drain channel. The most recent observation was 1.4 (g/L).

Mr. Strauss asked several questions that were raised during a recent SVTC community advisory board (CAB) meeting. The safety of using bromide as a tracer in the Iron Curtain area was a concern. Likewise, the CAB was concerned about the injection of sodium dithionite and wanted to be kept informed about the use of these chemicals. Mr. Chao responded that the sodium dithionite would be used in a bench-scale laboratory test before any field use to evaluate any toxic byproducts. Mr. Chao provided additional information on the planned injection test. The Iron Curtain technology is limited to depths of approximately 50 below ground surface (bgs) by available construction techniques. Injection of sodium dithionite converts in situ iron in the aquifer to the zero valent iron that detoxifies volatile organic compounds (VOCs) in groundwater. The chemical is injected, reacts, and the unused portion is extracted. Mr. Strauss asked about the use of bromide. Mr. Chao responded that bromide is a widely used groundwater tracer and that he was not aware of any toxic effects. Mr. Rochette added that the Iron Curtain tracer test was closely monitored, that only low levels of bromide were used, and that the groundwater from this aquifer was not used. Mr. Joseph Chou, DTSC, volunteered to consult with Cal/EPA toxicologists about bromide and report back to the RAB. Ms. Leslie Byster, SVTC, stated that she was concerned that the community have information available before the sodium dithionite injection. Mr. Chao replied that information would be provided.

Mr. Strauss asked how the continued operation of the Building 191 lift station, which is required as an institutional control in the OUI ROD, will be implemented since no deed or legal mechanism exists. Mr. Chao responded that the ROD is a legal, binding document and existing property transfer mechanisms require a records search, including environmental records, prior to transfer. The Navy and NASA will reach an agreement during the next year concerning institutional controls for continued operations at

Building 191. Ms. Sandy Olliges, NASA, noted that NASA's environmental resources document will be revised to include a discussion of Building 191 operations. Mr. Chao added that a note will be added to the facility plat map at the county assessor's office to inform potential land users of the institutional controls on the operation of Building 191.

Mr. Strauss asked whether a contingency plan had been prepared as part of the regional remediation system design for the VOC plume north of U.S. Highway 101 to address a situation in which the system did not perform as expected. Mr. Chao responded that the monitoring planned for the system will provide data to evaluate system performance and that the regulatory agencies will be part of the evaluation. Mr. Strauss asked whether a written contingency plan had been prepared. Mr. Chao stated that a written plan had not been prepared. Dr. James McClure, Harding Lawson Associates and consultant to the Middlefield-Ellis-Whisman (MEW) companies, added that the MEW ROD does not require a contingency plan because the ROD states performance requirements that must be met. The ROD specifies the type of remediation technology but does not require a particular number or location of groundwater extraction wells.

Mr. Strauss stated that the CAB was interested in the status of MEW activities and especially in the new construction activity in the MEW area. He requested that an MEW representative report on the redevelopment plans. Mr. Bob Davis, Mountain View resident, responded that it would be more appropriate to invite MEW to the CAB meeting rather than to address the RAB. Mr. Strauss stated that the transfer of liability during redevelopment is of public interest. He added that actions at the MEW site affect those at Moffett Field and that the RAB should look at broader, area-wide issues. Mr. David Glick, community co-chair, replied that the RAB could expand its view to many other cleanups in the area, but that the focus would be too broad. Mr. Bob Moss, community vice co-chair, added that liability is clearly assigned for redevelopment at the Palo Alto site and that he did not see the need for a presentation by the MEW companies. Mr. Chao suggested that Mr. Strauss contact the EPA project manager for the MEW site, Mr. Loren Henning. Mr. Strauss stated that he would contact Mr. Henning but that he believed that cleanup issues at the MEW site would be relevant to the RAB.

Mr. Glick stated that the MEW companies' views are represented by Dr. McClure as well as through the RPM meeting reports and that the time for comment on redevelopment is during planning studies and not at RAB meetings. Dr. McClure added that his knowledge of site redevelopment was limited but that EPA was fully involved in assessing redevelopment effects on remedial actions. He suggested that Mr. Henning

or Mr. Thomas Jones, Schlumberger, would be the best contacts for information about the MEW site. Mr. Strauss reiterated his opinion that an MEW presentation would be useful. Mr. Chao asked the members to vote on whether the RAB would like a presentation from the MEW companies. The proposal was rejected.

IV. COMMITTEE REPORTS

Mr. Chao asked the committee chairs to deliver their reports. Dr. McClure reported that the technical, historical, and educational (THE) committee met on August 13, 1997. Dr. McClure said that the committee had discussed two new documents:

- Final phase II SWEA report
- Site 1 postclosure monitoring plan

In relation to the SWEA report, Dr. McClure stated that the committee was interested in hearing detailed suggestions from the regulatory agencies on techniques to remediate wetland areas. He reported that the Site 1 postclosure monitoring plan summarizes how the Navy and the regulatory agencies will evaluate the future performance of the Site 1 landfill cap.

There were no reports from the cost, organizational, or communications, media, and outreach committees.

V. BADCAT PRESENTATION

Mr. Chao introduced Ms. Amber Evans of BADCAT who presented a summary of recent BADCAT activities. BADCAT is a mechanism to expedite cleanup and base conversion to facilitate economic development in the San Francisco Bay area. Petroleum compounds and metals are the most common contaminants and the first to be addressed by studies and cleanup demonstrations. However, groundwater monitoring and remediation, cleanup of sediments, and active remediation of wetlands are also issues of concern. BADCAT is seeking feedback on how to address these issues. A draft technology needs assessment report was distributed. Ms. Olliges asked how comments could be provided on the report. Ms. Evans responded this information was contained in the cover letter and that the report was scheduled to be finalized by the end of August 1997. Mr. Rochette stated that the RAB would be interested in information from other sites engaged in wetlands restoration. Ms. Evans replied that the Port of Oakland has information on dredging and wetlands creation. Ms. Mary Vrabel, League of Women Voters, asked for

information about a demonstration of in situ thermal desorption for PCB cleanup. Ms. Evans responded that tours will be available at the Mare Island demonstration site at the end of September 1997. Onsite seminars will also be presented. She added that the technology can be implemented in two configurations. Blanket-type heating pads can be used to treat soil down to about 3 feet bgs and thermal wells can be used for deeper applications. Ms. Vrabel asked whether the technology would be effective in wetland areas. Ms. Evans replied that the technology would not work in wetlands because their high water content would limit the transfer of heat to the soil. Mr. Steve Sprugaci, community member, asked whether information on innovative technologies, such as x-ray fluorescence, was available. Ms. Evans responded that she would send data sheets to Mr. Chao for distribution to the RAB. Mr. Strauss asked whether BADCAT provide funding for the technology demonstrations. Ms. Evans replied that the technology vendors provide the funding.

VII. REVIEW OF OUI ROD

Mr. Chao provided a summary of activities related to the final OUI ROD. The Navy and the regulatory agencies resolved the remaining language and legal issues and all parties, except DTSC, have signed the ROD. Mr. Tony Landis of DTSC is scheduled to sign the ROD on August 18, 1997. The ROD requires containerized material to be taken off site but only a small number of discarded gas storage cylinders were found at Site 2. Funding for the construction of the Site 1 landfill cap was scheduled for fiscal year 1998, but with the savings realized from the Palo Alto and light rail soils (about \$650,000), the Navy will complete the Site 1 cap using nearly all fiscal year 1997 funds. Completion of the Site 1 cap is scheduled for December 1997.

VIII. REVIEW OF FINAL SWEA REPORT

Ms. Kim Walsh, Montgomery Watson, summarized changes made between the draft final and final phase II SWEA reports to facilitate review of the final report. The table attached to the cover letter of the final report lists all the changes. One key change affects the conclusions of the report. The transfer coefficient for transfer of lead from soil to invertebrates was reduced, thereby reducing the lead dose to the burrowing

owl and decreasing its exposure risk. Other minor changes included incorporation of the additional bioassay statistical analyses requested by EPA in Appendix A and additional discussion of the use of toxicity reference values (TRVs) in the risk characterization section to address DTSC comments. Mr. Strauss asked whether the risk characterization discussion addressed the use of different hazard quotients (HQs). Ms. Walsh responded that the Navy's conclusion was that the best estimate of risk to ecological receptors was closer to HQ₁ while DTSC's opinion was that the best estimate was closer to HQ₄. DTSC's opinion was based on the belief that the lower TRV was most representative while the Navy's opinion was that the higher TRV was more appropriate. Mr. Strauss asked what process the risk managers would follow to assess risk and to identify the risk managers. Mr. Chao replied that the Base Realignment and Closure (BRAC) Cleanup Team (BCT) members are the risk managers: Michael Gill of EPA, Joseph Chou of DTSC, Michael Rochette of RWQCB, and Stephen Chao of the Navy. Mr. Chao stated that the risk management process will be described in the stationwide FS report. The process will involve the adjustment of the HQ maps to account for the revisions to the transfer coefficients and to account for local topography. Overlapping receptor ranges and chemical distributions may reduce the total cleanup area to be addressed.

Dr. McClure asked whether the agencies had provided any recommendations for technologies to remediate wetland areas. His understanding was that the Navy did not have any suggestions other than excavation and that the regulatory agencies had not provided any additional proposals. Mr. Rochette responded that the agencies have not yet taken a closer look to evaluate whether other cleanup technologies might be applicable. Ms. Vrabel added that the issue will be weighing the level of contamination versus the risks associated with habitat destruction. Mr. Rochette stated that he hoped to find a technology that would be effective regardless of the level of contamination and mentioned that phytoremediation (using plants to concentrate contaminants from soil) might be a possibility.

Mr. Paul Lesti, Mountain View resident, asked what wetlands mitigation requirements were commonly specified by the California Department of Fish and Game (DFG). Mr. Rochette replied that a 3 to 1 (ratio of new to destroyed) replacement policy is usually specified at RWQCB. Mr. Lesti stated that DFG comments indicate no less than 1 to 1 replacement. Mr. Chao added that wetlands mitigation was an open issue between the Navy and the regulatory agencies. Mr. Lesti asked whether elevated metals concentrations were present in the wetland areas and whether these concentrations would be remediated. He also asked for additional explanation of the HQ₁ and HQ₄ values. Ms. Walsh responded that the use of

the HQ₁ and HQ₄ values is to set boundaries on the risk range for the risk managers. The Navy's position is that the best estimate of risk is closer to HQ₁. Mr. Lesti stated that DFG comments do not believe the use of HQ₁ is acceptable. Mr. Chao replied that disagreements on which HQ value was most applicable were expected and that the risk range was included to allow the risk managers to evaluate the entire range. Dr. McClure reiterated that it was not clear what technologies were available to treat contaminants in wetland areas and requested an outline of these technologies if they exist. Mr. Chao responded that the Navy and the regulatory agencies would be discussing this and that he would report back to the RAB.

IX. AGENDA AND SCHEDULE FOR NEXT RAB MEETING

Mr. Chao proposed that the next RAB meeting be scheduled for October 9, 1997 and noted that the location of the next meeting would be the Mountain View senior center. Mr. Chao closed the meeting at 9:05 p.m.