

**MOFFETT FEDERAL AIRFIELD
RESTORATION ADVISORY BOARD MEETING**

MINUTES

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

THURSDAY, MAY 13, 1999

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 7:15 p.m. Mr. Chao began the meeting by reviewing the following agenda items for this meeting:

- Minutes approval
- Remedial project managers (RPM) meeting report
- Wetlands Ecosystem Goals Project presentation
- Site 22 landfill update
- Committee reports
- Agenda and schedule for the next RAB meeting

II. MINUTES APPROVAL

Mr. Chao solicited comments on the minutes of the February 11, 1999 RAB meeting. There were no comments and the minutes were approved without correction.

III. REMEDIAL PROJECT MANAGERS MEETING REPORT

Mr. Joseph Chou, San Francisco Regional Water Quality Control Board (RWQCB), provided a report on RPM meetings held on March 10, 1999, April 7, 1999, and May 12, 1999.

Mr. Chou reviewed field activities discussed at the RPM meetings. He said that the multipoint monitoring well was installed by Precision sampling as a part of the in situ abiotic redox manipulation (ISRM) pilot-scale study. Mr. Chou also said that a survey of the number of squirrel burrows had been conducted in the Site 22 area. Mr. Chou reported that the activities at Operable Unit (OU) 1 were complete except for the installation of a monitoring well, which will be completed on adjacent Cargill property. He said that the Navy is currently negotiating an access agreement with Cargill to install and sample the well. He added that the only remaining activities at OU1 were monitoring of the groundwater.

Mr. Chou reported that, with regards to the stationwide feasibility study, current discussion is related to selecting a cleanup value. Two different values (473 micrograms per kilogram [$\mu\text{g}/\text{kg}$] and 110 $\mu\text{g}/\text{kg}$) are being evaluated as cleanup levels in the Eastern Diked Marsh and stormwater retention pond based on different ingestion rate values found in the literature. A final decision about which cleanup level to use will be reached in the near future. He added that this issue must be resolved before cleanup activities can be conducted. Mr. Lenny Siegel, Center for Public Environmental Oversight, asked what the difference in excavation areas would be using the different cleanup values. Mr. Timothy Mower, Tetra Tech EM Inc. (TtEMI) and consultant to the Navy, said that 12 acres would be excavated using a cleanup value of 110 $\mu\text{g}/\text{kg}$ and 6 acres would be excavated using a cleanup value of 473 $\mu\text{g}/\text{kg}$. Ms. Sarah Jones, TtEMI and consultant to the Navy, added that if a cleanup value of 473 $\mu\text{g}/\text{kg}$ is used, 95 percent of the polychlorinated biphenyls (PCBs) in the Eastern Diked Marsh and stormwater retention pond would be removed. Using the 110 $\mu\text{g}/\text{kg}$ cleanup value, 99 percent of the PCBs would be removed.

Ms. Leslie Byster, Silicon Valley Toxics Coalition (SVTC), asked why values from literature were being used to select cleanup values. She said that she believed that there was a lot of site-specific information that could be used. Mr. Chao replied that the site-specific information did not include ingestion rates of mallard ducks. Ms. Byster stated that she thought that the receptor being used to calculate the cleanup value was a great blue heron. Mr. Chao replied that originally the great blue heron was used as the receptor to calculate the cleanup value, but site-specific analysis indicated that under the conditions found, the mallard duck was the more sensitive receptor. Ms. Kim Walsh, Montgomery Watson and consultant to the Navy, added that under the site-specific conditions found in the Eastern Diked Marsh and stormwater retention pond, using the mallard duck as a receptor results in the most conservative calculation of a

cleanup level. Mr. Peter Strauss, consultant to SVTC, asked whether using the mallard duck as the receptor was due to the fact that no fish were found in the Eastern Diked Marsh and stormwater retention pond. Mr. Chao confirmed this fact and said that since there were no fish found, the food source for great blue herons is amphibians. Using amphibians in the calculation for cleanup resulted in a less conservative cleanup value than using a mallard duck as the receptor.

Mr. Strauss then asked two questions related to activities associated with the stationwide feasibility study. He first asked how long the diked marshes and stormwater retention pond were dry during the year. Ms. Walsh replied that the Western Diked Marsh dried completely during parts of the year but the Eastern Diked Marsh had portions that were wet throughout the year. The extent to which the stormwater retention pond dries during the year is dependent on the quantity of precipitation during the rainy season. Mr. Strauss then asked whether the Navy has studied research conducted by Oswego State University. The research indicates that naturally attenuated PCBs have increased mobility. Mr. Chao replied that sampling has been done in both the stormwater retention pond and the Eastern Diked Marsh, and the results indicate that the PCBs do not appear to be mobile. Mr. Strauss stated that much of the research conducted at Oswego indicated that the more mobile PCBs would be taken up in algae and invertebrates. He asked whether this information has been taken into account in calculating cleanup values. Mr. Siegel then asked if PCBs would be more bioavailable after being attenuated. Ms. Walsh replied that laboratory results of the bioavailability of PCBs in site sediment had been used to directly calculate the transfer coefficient for ecological modeling. Both pickleweed and polychaete worms were used.

Mr. Siegel asked if there were any secondary sources that could recontaminate the area after excavation. Mr. Chao replied that there were not. One potential secondary source, the Lindbergh Avenue storm drain channel, has been excavated by the National Aeronautics and Space Administration (NASA). This activity, in conjunction with the construction of a settling basin, prevents the possibility of PCB-contaminated sediments entering the Eastern Diked Marsh. Mr. Siegel asked about any nonpoint sources, and whether there are any substations in the area containing PCBs. Ms. Tina Pelley, Science Applications International Corporation (SAIC) and consultant to NASA, replied that there are electrical substations in the NASA area. Mr. Strauss asked if the Navy sampled the wetland area for dioxins. Ms. Walsh said that

samples for dioxin analysis, specifically, had not been collected during the sitewide ecological assessment (SWEA). Mr. Siegel asked why they were not sampled. Mr. Chao said that he thought that dioxins are formed during incomplete combustion and did not know what a source for dioxins would be. Mr. Strauss replied that dioxins could be formed during the production of PCBs or from exposure to high heat during PCB use in electrical transformers. He added that he recommends that dioxins should be sampled in the future.

Mr. Strauss asked what technology was specified to treat the PCB-contaminated sediment. Mr. Chou replied several different technologies, including bioremediation and thermal desorption, have been evaluated in the feasibility study. He added that PCB-contaminated sediments are very difficult to treat especially to the low levels planned for the wetlands areas. Mr. Chao said that excavation and disposal off site is the most effective treatment. Mr. Siegel asked if diverting the water and thermally treating the sediment in situ had been evaluated. Mr. Chao replied that in situ treatment methods had been evaluated. Mr. Tom Iwamura, Santa Clara Valley Water District (SCVWD) and technical, historical, and educational (THE) committee member, said that the high water table will keep the soil moist and this prevents effective thermal treatment.

Mr. Chou went on to report that both the west-side aquifers treatment system (WATS) and east-side aquifer treatment system (EATS) are operating. Three WATS extraction wells that were not working as well as expected (EA1-1, EA1-6, and EA2-2) were redeveloped, and the Navy is currently working to improve their flow. Well EA1-1 is an extraction well at the center of the plume that was installed for mass reduction. Consequently, a high flow rate from well EA1-1 is not critical. Well EA1-4 is an extraction well installed in the shallower A1-aquifer zone that is located adjacent to extraction well REG-9B1 installed by the Middlefield-Ellis-Whisman (MEW) companies in the deeper A2-aquifer zone. Currently, the two wells are competing for water and well EA1-4 is unable to pump more than 3 gallons per minute (gpm). The Navy is currently evaluating the relationship between the two wells and will be working with the MEW companies and the U.S. Environmental Protection Agency (EPA) in the future to decide what will be done with the two wells. Well EA1-6 is not extracting as much water as anticipated because of the fine-grained sediments surrounding the well. Mr. Don Chuck, Navy, stated that the Navy is working with the control levels in the well to try to increase the drawdown within the well and the well flow rate. Mr. Chao added that well EA1-6 was installed to address the groundwater plume under a former gas station. He suggested that, even though the well has a

low yield, it might be enough to reduce the total petroleum hydrocarbon (TPH) contamination in the groundwater.

Mr. Chou reported that EATS is running well. He added that a completion report for EATS is scheduled to be finished this summer.

Mr. Chou then reported on the activities associated with petroleum sites at MFA. He said that he had just received a field work plan to address the investigation of 12 underground storage tanks that have not been previously studied. Mr. Chou also said that he has received an appendix to the basewide petroleum sites technical memorandum addressing Site 12. He added that he would provide comments to the Navy on both the appendix and the work plan.

Mr. Chou reported on NASA's investigation and remedial activities. He said that NASA has finished conducting field work for areas of investigation (AOIs) 4 and 11. The work consisted of direct-push sampling to characterize the extent of petroleum contamination. At the April RPM meeting, NASA reported that they had found trichloroethene (TCE) in soil and groundwater as part of a phase II investigation at AOI 4. The investigation indicated that there is a potential groundwater TCE plume upgradient and outside of the NASA boundary. The area is currently used for housing and is operated by the Air Force. Mr. Chao said that the area had once been Navy housing and that the Navy is looking into previous land use in the area. Mr. Paul Lesti, community member, asked what concentrations of TCE were found. Ms. Pelley replied that she did not recall the exact results. Mr. Chou added that the data have not been validated, but when the investigation summary report is available, he will let the RAB know what the concentrations were. Mr. Lesti asked what was upgradient. Mr. Chuck replied that the area had once been a farm. Mr. Lesti asked where the MEW plume was located in relation to where TCE was detected by NASA. Dr. Jim McClure, Harding Lawson Associates and consultant to the MEW companies, replied that there are several plumes, separate from the MEW plume that could be present in that area. Mr. Siegel asked where the Teledyne plume was. Dr. McClure replied that the TCE detected by NASA could not be a part of the Teledyne plume, since this plume was too far away. Dr. McClure added that there are several plumes in the area with no identified source.

IV. WETLANDS ECOSYSTEM GOALS PROJECT

Mr. Chao then introduced Ms. Peggy Olofson from RWQCB. Before Ms. Olofson began her discussion of the wetland ecosystem goals (WEG) project, Dr. Lynn Suer, EPA, spoke about the background of the WEG project and the focus of the discussion. Dr. Suer said that she asked Ms. Olofson to speak to the RAB because Mr. Siegel had asked about restoring the stormwater retention pond to tidal wetlands. Because the cleanup values used in the stormwater retention pond are based on the absence of fish, Mr. Siegel wanted to make sure that the cleanup values were taking future use of the area into consideration.

Dr. Suer continued by discussing the history of the WEG project. Dr. Suer said that Ms. Olofson became involved in wetland restoration in the bay area in 1993. The wetland restoration plan is regional in scope and was developed with input from many different agencies. She mentioned that the book, Baylands Ecosystem Habitat Goals, is the product of the input of these many agencies and documents the regional goals for identifying the types, amounts, and distribution of wetlands needed to support the ecology throughout the bay.

Ms. Olofson began her presentation by discussing the background and basis of the WEG project. She said that the underlying premises are that there should be no additional loss of wetlands within the baylands ecosystems and, as developed areas become available, they should be considered for restoration to wetland habitat. The area covered by the project was broken into region, subregion, and segments to define different goals for each area. On the regional, or bay-wide, scale, the goals include the creation of 1) many large, connected, patches of tidal marsh; 2) several large complexes of salt ponds; 3) extensive areas of seasonal ponds; 4) large expanses of managed marsh; 5) continuous corridors of riparian vegetation along streams; 6) restored beaches, natural salt ponds, and other unique habitats; and 7) intact patches of adjacent habitats, including grasslands, seasonal wetlands, and forests.

Ms. Olofson stated that the project was not trying to achieve historical levels of these ecosystems, just what is necessary to support healthy plant and animal populations. Ms. Olofson said that the goals for the subregion that contains MFA include: 1) restoring large areas of tidal marsh; 2) retaining several salt pond complexes; 3) restoring natural transitions; 4) protecting adjacent moist grasslands and vernal pools; and 5) controlling smooth cordgrass. Within the smaller segment that contains MFA, the goals include: 1) restoring large areas of tidal marsh

with corridors on the bayshore; 2) providing buffers and improving management; 3) retaining and improving two to three salt pond complexes; and 4) enhancing riparian corridors. As part of the WEG project, each segment within the bay was evaluated based on its unique features, opportunities for restoration, and benefits of restoring that area. Recommendations were made for restoration of the MFA area. Ms. Olofson suggested that, according to the plan, half of the Cargill evaporation ponds should be tidal marsh while the other half should remain salt ponds. She recommended that the stormwater retention pond remain as seasonal wetlands because of its value as seasonal pond habitat.

Ms. Olofson continued by highlighting the importance of a site assessment of the proposed habitat restoration area. From the site assessment, some important considerations include contamination, subsidence, water supply, sediment supply, neighboring lands, and sea level rise. Ms. Olofson concluded her talk by presenting the future efforts of the WEG project. She said that regional wetlands planning efforts will start soon and a companion report to the habitat goals and species and community profiles will be published soon.

Mr. Bob Moss, community member, asked what factors were used in assigning values to habitat and how the quantity of each habitat was decided. Ms. Olofson replied that project members chose species that represented the diversity of the bay then defined the key habitats that support those species. From this information, a habitat-use matrix was built. Using professional judgment, the matrix was used in each area to build what the group thought would make healthy populations. Mr. Moss then asked whether some species were considered more important than others in selecting a habitat matrix. Ms. Olofson said that species selection criteria were used as a guide in selecting the species used, and endangered and native species were given priority. Mr. Siegel stated that he still felt that the stormwater retention pond should be returned to tidal marsh in a manner similar to the area west of Stevens Creek. He also indicated that he thought elevation was an important issue in restoration. Ms. Olofson agreed, stating that it is very important to get topographic information as it relates to flood protection, seasonal wetlands, and sedimentation. Mr. Siegel then said that federally owned land is easier for U.S. Fish and Wildlife to take over than private land. He said that the WEG project group was not taking ownership and cost into consideration when evaluating the types of habitats to be restored. He said that, taking these two factors into consideration, the stormwater retention pond was still a good candidate for tidal marsh restoration. He stated that the pond is a degraded habitat and

would need restoration even as a seasonal habitat. Mr. Siegel said that the cleanup goals should be set to allow tidal marsh restoration as an option. Ms. Olofson replied that the project is not currently looking at ownership and that continual planning efforts are still needed. The next step of the project involves wetlands planning, which includes consideration of wetlands restoration phasing and ownership. Mr. Strauss said that he thought that recommendations for restoration should be opportunistic; if the option of restoration becomes available, it should be used despite the areas depicted on the planning map. Ms. Olofson agreed, stating that the restoration areas shown on the map are conceptual, and plans for restoration should remain flexible.

Ms. Byster asked if there was any connection between the WEG project and the Watershed Management Initiative (WMI). Ms. Olofson replied that there are two groups under WMI (wetlands and watershed) and the WEG project is one of them.

Mr. Moss asked if contamination had been addressed in the book Ms. Olofson mentioned in her opening remarks. Ms. Olofson said that contamination is addressed on a site-by-site basis, but an area would not be ruled out because of contamination. The future remediation of contaminants is unknown and it is impossible to rule out an area based on the presence of contamination. Mr. Moss then asked whether the WEG project would accept contaminated wetlands as a gift? Ms. Olofson replied that it would be considered.

V. SITE 22 LANDFILL UPDATE

Mr. Chao provided an update on proposed remedial actions at the Site 22 landfill. He said that in the Site 22 feasibility study a biotic barrier was presented as the preferred alternative. In preparing for the remedial design, the Navy discussed the biotic barrier with staff from the City of Mountain View and the City of Sunnyvale. The Navy received comments from the City of Sunnyvale suggesting that a biotic barrier would not be an effective technology. Currently, the Navy is considering using a ground squirrel abatement program to control burrowing and subsequent excavation of waste materials in the Site 22 area.

VI. COMMITTEE REPORTS

Dr. McClure reported that Site 22 had been discussed at the THE committee meeting on May 12, 1999. Also discussed at the meeting was increasing the effectiveness of the WATS extraction wells and the request for no further action in Appendix A (Site 12) of the basewide petroleum sites technical memorandum. Ms. Cathrene Glick, Geo Plexus and RAB co-chair, reported that the administrative committee had met and decided that although Mr. Iwamura was retiring, he was welcome to come to RAB meetings as a public member. Mr. Iwamura replied that when he is in the area he would try to attend.

Dr. McClure said that the MEW all-parties meeting was held on March 12, 1999. The primary discussion at the meeting centered around the relationship between the startup activities at the MEW wells and WATS, and enhancing the effectiveness of the WATS extraction wells.

VII. AGENDA AND SCHEDULE FOR THE NEXT RAB MEETING

Mr. Chao solicited topics for the next RAB meeting and suggested the Site 22 proposed plan. Mr. Siegel asked whether someone from NASA could come to speak about the future use of the Site 22 area, including the proposed ferry landing. He said that there are a lot of practical problems that need to be addressed before this proposed land use could be implemented. Ms. Pelley said that she would talk to someone from NASA to see whether someone could come to speak. Ms. Byster asked when the public meeting was scheduled. Mr. Mower replied that by the current schedule, it would be sometime in July, but it would depend on regulatory response times. He added that the Site 22 public meeting date should be set before the next RAB meeting.

Mr. Chao closed the meeting at 9:30 p.m.