

**FORMER MARINE CORPS AIR STATION
TUSTIN RESTORATION ADVISORY BOARD MEETING
October 19, 2005
MEETING MINUTES**

The 71st Restoration Advisory Board (RAB) for the Marine Corps Air Station (MCAS) Tustin held its regular meeting on Wednesday, October 19, 2005, at the Clifton Miller Community Center in Tustin from 7:11 p.m. to 9:30 p.m. These minutes summarize the discussions and presentations from the RAB meeting.

WELCOME/INTRODUCTIONS/AGENDA REVIEW

Mr. Don Zweifel, RAB Community Co-Chair, said the RAB was established in 1994 and he is one of the original members, along with a few remaining founding RAB members that are here tonight. He welcomed everyone to the meeting and said tonight's presentations will be very interesting. He then asked for introductions of attendees.

Mr. Darren Newton, Base Realignment and Closure (BRAC) Environmental Coordinator (BEC) and Navy RAB Co-Chair, said Mr. Dean Gould, Base Closure Manager, will be returning from Iraq and will be back in the office on November 7, 2005. He said Mr. Jerry Dunaway, former BEC for MCAS Tustin, and the acting Base Closure Manager, and will continue to serve as the BEC for Mare Island.

Mr. Newton said that Mr. James Ricks, U.S. Environmental Protection Agency (U.S. EPA) representative on the RAB, is unable to attend tonight's meeting. He is supporting U.S. EPA efforts in Louisiana dealing with the aftermath of Hurricane Katrina.

Mr. Newton said a variety of informational materials on MCAS Tustin are available on the handout table. He emphasized that the BRAC Program Management Office (PMO) West website is listed on the meeting agenda along with contact information. He mentioned the Administrative Record (AR) is located at the BRAC office at MCAS El Toro and the Information Repository (IR) is located at University of California, Irvine's main library.

Mr. Newton reviewed the MCAS Tustin RAB mission statement. He read a key portion of the mission statement (page 1, paragraph I.a.) stating the reasons for the inception of the RAB are *"to promote efficient and effective cleanup that results in protection of human health and the environment and the timely conversion of MCAS Tustin. The RAB serves to increase community awareness by disseminating information about the Installation Restoration Program and to assure that opinions about the environmental restoration reflect the diverse interests of the community. The RAB functions in an advisory capacity to MCAS Tustin, U.S. EPA, and California EPA by conducting regular and thorough reviews of environmental restorations plans and compiling constructive comments from these reviews for submittal to MCAS Tustin."*

Mr. Newton thanked the RAB members and others for attending tonight's RAB meeting. He acknowledged those that volunteer their personal time to participate and he expressed his appreciation for everyone's participation.

OLD BUSINESS

Approval of 7/20/05 RAB Meeting Minutes – Don Zweifel (MCAS Tustin RAB Co-Chair)

Mr. Zweifel asked for any changes or comments prior to approval of the July 20, 2005 RAB meeting minutes. Mr. Dana Ogdon, RAB member representing the city of Tustin, said he could not approve the minutes because he was unsure of the Navy's response to the MTBE plume issue. The approval of the meeting minutes were postponed until the February 15, 2006 RAB meeting pending further review of the minutes, page 3, discussion section. (Note: The tape from the meeting will be reviewed and an amended version will be prepared for RAB approval.)

NEW BUSINESS

Installation Restoration Program Status Update – Darren Newton

Mr. Newton provided an update of the MCAS Tustin Installation Restoration Program (IRP). He noted that key items and the next steps to be taken are emphasized in bold on the handout. Mr. Newton went through the steps of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) program process. He guided the RAB through the CERCLA process and how the Navy proceeds from the Remedial Investigation/Feasibility Study (RI/FS) phase where environmental problems are defined and cleanup alternatives are developed to the Remedial Design/Remedial Action (RD/RA) phase where the design plans are formulated and cleanup is implemented.

Operable Unit (OU) 1A IRP-13 South - 1,2,3-trichloropropane [TCP] groundwater plume) and OU-1B (IRP-3 and IRP-12 - trichloroethylene [TCE] groundwater plumes) – The Final Record of Decision (ROD) was signed on December 23, 2004. The soil removal and site restoration at OU-1A was completed in June 2005 and the report was issued in July 2005. Approximately 4,400 tons of TCP-contaminated soil was removed from the area at Severyns Road and Valencia. The Draft Remedial Design (RD) was submitted June 28, 2005. The groundwater treatment system enhancements are currently in design. The system with the enhancements will be operating in 2006. Property transfer will occur after the Operating Properly and Successful Report is concurred upon by the regulatory agencies and this is expected to occur in 2007.

Soil removal at Operable Unit 1B was conducted in September 2005. Both OU-1A and OU-1B are at the end of the CERCLA process and in the RD/RA phases.

OU-4 (IRP-6, -5S(A), -11 [Areas B and C], 13W, MMS-04 [Area B]) – OU-4 is split into OU-4A and OU-4B. The final OU-4A ROD for no further action was signed on January 3, 2005.

For OU-4B, the Draft FS Report was issued on August 23, 2005 for regulatory agency review. A presentation was made at the July 20, 2005 RAB meeting. The Navy is evaluating all the alternatives in the FS. The Draft Final FS Report incorporating regulatory agency comments is scheduled to be issued during winter 2006. The Final FS is scheduled for completion in spring 2006. The Navy

will recommend the best alternative possible for OU-4B in the Proposed Plan that is scheduled to be issued for public review in spring 2006. The Final ROD is scheduled for October 2006.

The Arsenic Area of Concern (AOC) Removal Action – The removal action addressed arsenic-contaminated soil at Buildings 190 and 251 and was completed in February 2005. The Final Closure Report was issued in June 2005.

MTBE (methyl tert-butyl ether) Groundwater Plume (Underground Storage Tank [UST] Site 222) – The Navy proposed site cleanup goals for groundwater in January 2005. The revised cleanup plan was submitted for regulatory agency review in July 2005. MTBE-contaminated soil is the source of MTBE contamination in the groundwater. Excavation of this soil will eliminate the contamination source and enhance groundwater cleanup. Through June 2005, approximately 10,000 tons of soil have been excavated and hauled off-site and disposed of. On September 29, 2005, soil removal actions were completed, based on regulatory agency comments, the Navy will refine the groundwater treatment system detailed in the work plan and evaluate the downgradient portion of the plume. The Navy is transitioning to a new contractor that will finalize the remedial design and implement the remedial action.

Findings of Suitability to Transfer (FOST) #7 – The purpose of the FOST is to define the environmental condition of the property and certify it is clean and ready for transfer. The Navy signed off on this FOST on May 20, 2005, consisting of carve-out areas (CO) 3 and 7 and portions of CO-5.

FOST #8 – This FOST includes COs 1 and 4 and is planned for late 2006. If contamination is found after transfer, then the Navy will implement the Department of Defense “come back policy” and follow the CERCLA program process for remedial action. Mr. Newton said a handout is available on the information table that covers the Navy’s policy.

Mr. Newton discussed the overall MCAS Tustin property disposal and environmental cleanup expenditures. The BRAC closure date was 1993, and the operational closure date for military activities occurred in 1999. Mr. Newton said the former station consists of 1,602 acres and there are 95 acres remaining to be transferred, with 113 acres currently leased. The public sale revenue was \$208 million dollars. For environmental cleanup, expenditures through fiscal year (FY) 2005 were \$95.5 million and the FY2006 environmental cleanup budget is \$2.6 million. Mr. Newton said the FY06 budget may seem low but this is because the Navy’s cleanup programs are nearing completion. The overall cost-to-complete is \$27.5 million dollars, mostly for long-term monitoring and maintenance.

Mr. Newton said it is possible that in 2.5 years former MCAS Tustin will mostly be in operation and maintenance (O&M) mode focusing on long-term monitoring and maintenance. Mr. Zweifel asked if someone will be on site daily or monthly to check up on the systems. Mr. Newton said necessary contracts will be awarded through the BRAC PMO and contractors will monitor the systems.

Mr. Newton said the FY05 accomplishments included the completion of OU-4A, and the Draft FS Report for OU-4B which is undergoing regulatory agency review. He further discussed FY05 accomplishments and FY06 plans .

FY05 Focus Areas and Accomplishments

- OU-1A – Soil removal completed in April 2005.
- OU-1B – Soil removal completed September 2005.
- OU-3 – Long-Term Monitoring phase is ongoing.
- OU-4A – All activities completed.
- OU-4B – Draft FS issued on August 23, 2005.
- Arsenic AOC – Soil removal completed in February 2005. Closure Report finalized in June 2005.
- Closed out last Area of Concern in Compliance Program.
- Unrestricted release of buildings with radiological concerns.
- Negotiated tiered approach for groundwater cleanup goals for the MTBE plume.

The FY06 Plan of Action

IR Program

- OU-1A and OU-1B - The remedial designs for groundwater are progressing and is scheduled for completion in March 2006, with field activities scheduled to begin in March 2006.
- OU-3 - First 5-year review scheduled for completion in November 2006.
- OU-4B - Final FS scheduled for March 2006. Draft ROD is scheduled for regulatory agency review in August 2006.

Compliance Program

- Complete MTBE groundwater site remediation in accordance with RWQCB-concurred-upon tiered groundwater cleanup criteria (300 micrograms per liter [$\mu\text{g/L}$] in the 1st water-bearing zone [WBZ] and 44 $\mu\text{g/L}$ in the 2nd WBZ).

Ms. Mary Lynn Norby, RAB member, asked if the Draft FS Report for OU-4B has been issued for review and if the RAB has had a chance to review it. She also said interested RAB members should receive a copy of the Executive Summary of the report. Mr. Newton said Mr. Zweifel received a copy of the Draft FS report and copies are also available at the AR and IR. Ms. Norby asked about the formation of the OU-4B subcommittee and Mr. Newton said forming such a subcommittee and holding a meeting is warranted and he will let RAB members and others know when this will occur. The names of interested participants will be collected. Mr. Ogdon said the formation task for RAB subcommittees has always been a Navy responsibility and some RAB members expressed their interest at the last RAB meeting and this is noted in the July 20, 2005 RAB meeting minutes. Ms. Norby asked if the RAB will have an opportunity to also see the city of Tustin's comments on the Draft FS Report. Mr. Ogdon said he had a copy of the city's comments with him for Ms. Norby to review.

Mr. Ram Peddada, Department of Toxic Substances Control (DTSC), suggested the Navy complete its review of regulatory agency comments, prepare the response to regulatory agency comments, and develop a revised Draft FS prior to RAB review and conducting a subcommittee meeting. The document would then be complete and more beneficial for the RAB to review. Ms. Content Arnold, Lead Remedial Project Manager (RPM), said there are some significant technical issues being worked out with the Draft FS. She reiterated that the Navy will definitely have a subcommittee meeting and will

further inquire which RAB members would like to be involved. A sign-up sheet for the OU-4B FS subcommittee was passed around.

Regulatory Agency Comment Update - Regulatory Agency Representatives:

Ram Peddada, Project Manager, Cal/EPA Department of Toxic Substances Control (DTSC)

Mr. Peddada said since the last RAB meeting, DTSC had been working on the OU-1A and OU-1B Draft Groundwater Remedial Design (60-percent design). DTSC submitted comments on this document. He said that the document is not complete, because the Navy has additional design work to complete on the granular activated carbon (GAC) units. The design calls for linking the two IRP Site 3 and IRP Site 12 pump-and-treat systems together along with the GAC units.

Mr. Peddada said he is reviewing the OU-4B Draft FS Report and comments are due this Friday, October 21, 2005, but DTSC asked for a one week extension. Mr. Peddada said the Draft FS OU-4B is not a complete document, and he asked that the RAB wait until the Navy has finished responding to agency comments, and incorporates additional technical information into the document. Ms. Arnold said conducting a RAB subcommittee meeting for the OU-4B FS is viable but the timing needs to be discussed among the Navy and the regulatory agencies. The Navy will contact the RAB regarding the updated Draft FS and schedule a subcommittee meeting. The revised FS will contain additional modeling data, information regarding cleanup levels, and more information pertaining to IRP Site 5S(a).

Patricia Hannon, Project Manager, Regional Water Quality Control Board (RWQCB)

Ms. Hannon said she completed review on a number of documents. She reviewed the June 2005 Site Closure Report for Building 251 Hydraulic Lift Area and RWQCB approved closure on July 28, 2005. She reviewed OU-1A Draft Soil Closure Report and concurred with the findings in a letter sent on September 12, 2005. She reviewed the July 2005 Draft Addendum for the Final Interim Petroleum Corrective Action Plan for the MTBE Groundwater Extraction and Treatment System, Phase I and II at UST-222 and comment letter was sent on September 14, 2005. She is currently discussing the MTBE cleanup goals and possible disposal options for the treated water. The Navy had discussed the distribution of the water using infiltration, and so far, the RWQCB does not have any issues with infiltration. The RWQCB concurred with the findings associated with the eventual shut down of the interim treatment systems but groundwater monitoring will need to show that the Navy's modeling is representative of the environment. Ms. Hannon reviewed the Draft Addendum to Work Plan, Site Verification Activities, Aquifer Characterization and Testing at IRP Site 5Sa. She also reviewed the 60-percent Design Submittal for Hydraulic Containment for OU-1A and OU-1B. Ms. Hannon said she is currently reviewing the Draft FS report for OU-4B, the Draft Annual System Performance Report for the PCAP system, and a variety of groundwater monitoring reports for OU-4B, OU-3, OU-1 and UST-222.

Presentations:

Recognition for Mr. Chris Johnson, Shaw Environmental

Mr. Newton said that tonight the Navy is going to acknowledge the hard work and accomplishments of Mr. Chris Johnson of Shaw Environmental who worked on the cleanup of MCAS Tustin for the past 10 years. Mr. Newton presented a slide/photo show that highlighted the many cleanup activities that were managed by Mr. Johnson. Mr. Johnson's accomplishments over the years include numerous excavation projects, removal of above ground storage tanks (ASTs) and underground storage tanks (USTs) and associated pipelines, including those of ASTs 169 and 170 (JP-5 fuel farms) and UST-222, and over 200 areas of concern (AOCs) at the former station. He also noted that Mr. Johnson is responsible for the majority of UST removals. The slide show also contained light-hearted series of questions and answers pertaining to Mr. Johnson's accomplishments.

Mr. Marc P. Smits, Navy RPM, presented a letter of appreciation to Mr. Johnson from Ms. Kimberly Kessler, Director of BRAC Project Management Office (PMO). The BRAC PMO wants to thank Mr. Johnson for his instrumental work in helping the Navy to reach its goals. He added that his relationships with the public and the regulatory agency members are most appreciated. Mr. Smits then read the letter of appreciation from Ms. Kessler –

Mr. Chris Johnson has played an active role in the successful completion of the cleanup of various compliance and Installation Restoration Program sites at Marine Corps Air Station (MCAS) Tustin. For over 10 years, Mr. Johnson has acted as site superintendent providing oversight for the ongoing compliance program at MCAS Tustin. Mr. Johnson was responsible for the regulatory closure of over two-hundred Areas of Concern (AOCs) and the majority of the Underground Storage Tank (USTs) sites at the base. His knowledge of site conditions, interaction with the regulators, and his relationship with the public has been a major asset to the Navy.

Among Mr. Johnson's major achievements are the operation of an on-site thermal desorption unit to treat contaminated soil, obtaining closure for all remaining AOCs, and conducting soil and groundwater cleanup activities for the former gas station at MCAS Tustin. The closure of these AOCs and UST sites resulted in the majority of former MCAS Tustin being available for transfer to the city of Tustin, developers, and other entities. The BRAC Program Management Office would like to recognize Mr. Johnson for his efforts and acknowledge that his contribution to the cleanup of MCAS Tustin have been instrumental in meeting the Navy's goal of productive reuse of former Navy property.

Mr. Johnson expressed his appreciation for the presentation and the acknowledgement of his efforts. He said he considers these "team achievements" and this success is not just an individual effort but a team effort. He said the overall goal of the team is to clean up the base and turn it back over to the community. He noted he has witnessed the beginning of the cleanup through to the tail end of this process, as well as, the development that is now occurring at the former station to integrate the base back into the city of Tustin. He said he is very proud of these efforts and thanked the Navy and the RAB for their support.

Mr. Zweifel said that it has been a great honor to have worked with Mr. Johnson over the years and his presentations to the RAB were always informative. He said Mr. Johnson will be sorely missed because he has a phenomenal knowledge of the base and hopes to keep in touch with him.

Summary of the American Society of Civil Engineers (ASCE) and the RAB Tour of Environmental Cleanup Sites

Mr. Newton introduced Mr. Fred Meier, RAB member, to give a summary of the ASCE tour of former MCAS Tustin that occurred in August 2005.

Mr. Meier said the ASCE has a yearly field trip, and this year he proposed visiting former MCAS Tustin and the sites where environmental cleanup is currently underway. The ASCE board agreed and he arranged all logistics with Mr. Jerry Dunaway, former Navy RAB Co-Chair, and Mr. Mark Tomich from the city of Tustin. On August 18, 2005, 136 ASCE members and a few RAB members boarded buses and took a tour of the base. Those on the tour were able to view the UST-222 area and witness groundwater being pumped at IRP 13S.

Mr. Meier said Mr. Johnson did a great job of explaining to everyone the mechanics of the treatment system. The tour group also stopped at Blimp Hangar No.1. Mr. Meier said when he was in the Navy in 1945 he was fortunate to work on a couple of projects near the hangar. He said both blimp hangars were previously nominated as a National Historic Landmark as they are the largest wood-made structures in the world. The tour group also stopped by the Moffett Trenches landfill site. After the tour, everyone participated in a barbeque.

He thanked Mr. Johnson of Shaw Environmental and Len Allen from Ninyo & Moore, for helping to fund the trip, and the Navy for allowing ASCE to tour the base.

Mr. Zweifel said he is a representative of the American Museum of Military History and this group is trying to save the northern-most hangar. This group is interested in housing a museum at the hangar.

Mr. Meier added that there were three brass plaques that have been removed from the blimp hangars. Mr. Newton said he is trying to locate them and has made calls to MCAS Miramar to track them down. He will keep Mr. Meier informed on any developments.

Update on UST-222 and Cleanup of methyl tert-butyl ether (MTBE) in Soil and Groundwater

Mr. Smits, who is the RPM for the UST-222 MTBE cleanup project, provided a status update to the RAB and the next scheduled tasks. He noted that the project is in a transition period with the end of the Shaw Environmental contract, and a new contractor, Battelle, will now be running the Petroleum Corrective Action Program (PCAP) treatment system for cleanup of MTBE. The Navy will now be working with a Battelle to oversee monitoring and maintenance. Battelle will also implement a final corrective action to meet newly established cleanup goals. He noted that API, the subcontractor who operated the treatment system, has been retained.

Mr. Smits said the PCAP system has been operating above 90 percent efficiency over the past month. As of September 30, 2005, approximately 93 million gallons of MTBE-

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contaminated groundwater has been extracted, treated, and discharged. The results from the extraction well and influent samples continue to indicate downward trends in concentrations over time. There are six extraction wells, two located at the top of the source area and four are further downgradient. Overall, the general trend indicates decreasing concentrations.

Mr. Smits said treatment is a two-step process. The HiPox system treats the extracted groundwater and the BioGAC system treats residuals in the groundwater. The National Pollutant Discharge Elimination System (NPDES) sampling results from August 23, 2005, indicate effluent concentrations were below the discharge requirements. Specifically, for MTBE influent into the HiPox system was 880 µg/L and effluent was 0.55 µg/L which is considered a non-detection. The discharge limit for MTBE is 13 µg/L. For 1,2,3-TCP, influent was 9.6 µg/L and effluent was 0.34 µg/L which is considered a non-detection. The discharge limit is 0.5 µg/L.

In regard to the cleanup goals for MTBE proposed by the Navy, a letter from the RWQCB dated September 14, 2005 informed the Navy that the agency accepted the proposed cleanup goals for the three WBZs. The established cleanup goals for the MTBE site WBZs are:

- 1st WBZ – 300 µg/L
- 2nd WBZ – 44 µg/L
- 3rd WBZ – 13 µg/L

Mr. Smits said the cleanup for the 3rd WBZ is currently being met. He added that with the accepted cleanup goals, the Navy will proceed with developing the final Petroleum Corrective Action Plan. Mr. Zweifel said that a Petroleum Corrective Action Plan sounds like a legal document or an “order” from the RWQCB and he asked for a clarification. Ms. Hannon explained that this is not RWQCB order and that the Petroleum Corrective Action Plan is just a corrective action that deals specifically with cleanup of petroleum and this is outside of the CERCLA program.

Mr. Smits went through the presentation slides that showed the extent of MTBE in the 1st and 2nd WBZs. The contours are based on data obtained from the 2nd Quarter, 2005 Groundwater Monitoring Report. The first slide shows a 10 µg/L MTBE contour in the 1st WBZ. The edge of this contour represents the extent of the plume where 10 µg/L of MTBE is present. Contours for 100 µg/L and 1,000 µg/L are also shown, but the 10 µg/L surrounds the areas with higher concentrations (100 and 1,000 µg/L). The map also shows another area where a 10 µg/L contour is shown that is south of the larger 10 µg/L contour area. Mr. Smits said that prior to the setting of cleanup goals for MTBE, this is how the MTBE plume contours have been presented. He showed another slide that only shows the 300 µg/L MTBE contour, which represents the area where cleanup of the MTBE plume in the 1st WBZ will be targeted. He pointed out the two extraction wells needed to cleanup the MTBE source area. At previous RAB meetings, possible use of a third extraction well was discussed. However, use of the two wells (as part of PCAP system) the plume has been contained in the source area. When the 300 µg/L MTBE cleanup goal is applied in the 1st WBZ, the source area plume boundary is less than previous representations.

Mr. Ogdon asked if he was reading the table correctly that states that no well has MTBE detections of 300 µg/L or less. Mr. Smits confirmed that this is correct. Mr. Ogdon asked why the second graphic shows the only place that is 300 µg/L or more is in a

small part of the plume. Mr. Smits said the reason is that these wells are screened in two WBZs, so the numbers shown are an average of two WBZs. The plume maps show data from monitoring wells, the data on the NPDES chart is from extraction wells.

Mr. Zweifel said the NPDES chart shows that at Well EO-5, there are 2,400 µg/L of MTBE and it says this has decreased, but how much of a decrease is this? He pointed out that previous presentations for the PCAP system also included a line graph that shows increases and decreases in the concentrations of MTBE. He asked how much has this decreased seen since the last monitoring well results. Mr. Smits said he would add a chart for the next presentation that includes the decreasing/increasing concentrations. He added that the purpose of this presentation is to show the overall current status and what is planned in regard to future MTBE cleanup from the perspective of having approved cleanup goals for MTBE.

In referring the 1st WBZ, Mr. Smits said concentrations shown are from monitoring wells and most results are reported less than 50 µg/L and some are non-detect, while the results from the extraction wells show elevated concentrations. He concluded that while concentrations in the monitoring wells are low (less than 50 µg/L) most of the MTBE mass is suspected to be coming from the 2nd WBZ, not the 1st WBZ.

Mr. Zweifel suggested that slides and handouts in future presentations that show the MTBE plume and data results need to be easier to read with increased font size that is bolded and that data boxes on the plume maps should not be cut off. Mr. Smits said that the intent of these figures is to show the areas where cleanup goals apply.

Mr. Smits showed the RAB the MTBE plume maps for the 2nd WBZ. He pointed out the 10 µg/L MTBE contours. In the 2nd WBZ there are two areas, one to the north and a second to the south, where these contours are shown. When the 44 µg/L MTBE contours are applied from the computer model, these contours are a bit smaller. He said this effectively cuts the plume size in half. Mr. Ogdon said the Navy is showing is an MTBE plume that has never been that far south in any graphic that was previously presented to the RAB. Mr. Smits said that is because another well was installed last year and this map shows these new detections of MTBE. He said the Navy is now aware of this and the Navy has a plan to address the downgradient plume. Mr. Zweifel said the RAB needs to know the details of the new well in the downgradient plume.

Mr. Smits said there are two parts to the Draft Interim PCAP Addendum. First, it includes a conceptual design for an infiltration system to dispose of the treated groundwater. The water would be infiltrated within the site without transporting it through the storm drain. There are several benefits to this approach. The treated water would be highly oxygenated and after it is infiltrated at the site, this would help with bioremediation of groundwater. Also, there is some residual contamination in the soil along the edges of the excavated area that could not be removed during the soil excavation action. Infiltration would provide a way to target these areas to flush out the residual contamination.

Second, the Draft Interim Addendum also presented the modeling and documentation used for developing the cleanup goals for the site. Comments from the regulatory agencies and the city of Tustin on the addendum addressed the following four categories:

Approach to infiltration (aboveground sprinklers vs. underground piping)
Impact to future property use (community park)
Operation/maintenance of infiltration
Elevated downgradient MTBE concentrations that were recently detected

In the comments, there were recommendations to switch from aboveground sprinklers to underground piping to accommodate redevelopment of the base. The sprinkler system could cause ponding and possible creation of a wetland. There would also be vegetation growth and this could impact the effectiveness of the infiltration process. Mr. Smits said the Navy has identified the location of residual contamination and will be able to target the infiltration system to those areas. Regarding the comments, the Navy now knows which sprinkler locations are of concern to the City. The Navy will take this into consideration as the project moves forward.

Mr. Smits said the Navy is developing an Infiltration Work Plan in order to address the comments submitted for the PCAP addendum. This work plan will present a detailed design for the infiltration system and present an approach to collect more data and evaluate the downgradient MTBE concentrations. This area is beyond the area where extraction wells are installed.

Concurrent with the development of the Infiltration Work Plan, the new contractor, Battelle, will develop the Final Petroleum Corrective Action Plan presenting the approach to meet the MTBE cleanup goals, use the existing treatment system and combine it with additional innovative technologies. The final plan will incorporate data obtained from field work outlined in the work plan. The innovative technologies and approaches are intended to target the remaining areas of the plume with concentrations above the cleanup levels within the 1st and 2nd WBZs. It is anticipated that the Final PCAP will be implemented in the summer of 2006. Mr. Smits said that in Ms. Hannon's letter that accepted the cleanup goals, monitoring must be conducted to ensure that the cleanup goals are met.

Mr. Zweifel said the RAB would be interested in hearing from Battelle on the innovative technologies. Mr. Smits said it would be best to present Battelle's findings after a draft report is developed, and that would occur in spring 2006.

Mr. Smits reminded the RAB that the current treatment system is still working and all the work that Mr. Johnson accomplished regarding reducing MTBE concentrations should make Battelle's job a lot easier.

Discussion:

Mr. Zweifel asked if there have been any power failures with the PCAP system. Mr. Smits said the Navy has their own direct electrical line from Southern California Edison and no problems have occurred. Mr. Ogdon asked if the RWQCB has made comments yet on the PCAP Addendum. Mr. Smits acknowledged that RWQCB has submitted comments to the Navy and a copy will be made available for Mr. Ogdon.

Mr. Zweifel said the Navy should consider reinjection of treated water back into the aquifer as opposed to above ground sprinklers or discharge to Peters Canyon Wash. Ms. Hannon said it is up to the Navy to decide where to discharge treated water. The RWQCB has provided the Navy the discharge limits for treated water discharge to

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Peters Canyon Wash. The Navy needs to evaluate what their options are and this includes meeting discharge requirements for selenium. She said the Navy has several options to evaluate including reinjection, applying treated water to the land, using the sanitary sewer, and using Peters Canyon Wash. Regarding reinjection, Ms. Hannon said it is difficult to reinject water and it often takes twice as many reinjection wells to put the water back as compared with the number of extraction wells used for removing the water. Also, it is important to not flood the system which could move the plume to another location. She added that reinjection can be used to contain a plume. Computer modeling is necessary to determine if reinjection is viable and a good understanding of the geology is needed.

Mr. Ogdon pointed out to the RAB that the City has hired a consultant to help them to understand what is occurring with the MTBE plume. He said the biggest concern of the City pertains to the 44 µg/L cleanup goal in the 2nd WBZ and that the plume that has been discussed for several months has moved very far south and is very close to the boundary edge of the Navy property and will soon migrate under privately held property. The City submitted comments to the Navy suggesting that an extraction well be installed to stop the spread of the plume from Navy-controlled property onto private property. Mr. Ogdon asked Ms. Hannon if she has made any comments to the Navy to do something immediately to stop the migration. Ms. Hannon said she previously made comments, but could always amend the comments to include additional concerns.

Mr. Smits said the Navy's will further investigate the south end of the plume. Mr. Ogdon said in 12 months the plume has moved 1,500 feet further. Mr. Smits said the MTBE may not have migrated there it could have been there previously and that is why further evaluation is necessary. A representative from the Orange County Water District (OCWD) said, based on the lack of data points, the plume could already be off-site. Ms. Arnold said the Navy is aware of the downgradient portion of the plume and is moving expeditiously on the work plan to further evaluate this area. At the next RAB meeting more information may be available. The Navy does not want to conjecture on "what if" but data needs to be obtained and it will be shared with the RAB. The representative from OCWD added, that based on what has been presented tonight it is possible that MTBE has migrated off-site, but it is also possible it has not migrated off-site. Mr. Smits concurred with that statement.

Mr. Newton explained that while both scenarios are possible, contours are an interpolation of data based on a logarithmic formula from one point to another. So the value at one point is x and the second point is y, a mathematical calculation is done to estimate the middle point and define it as a line on a map. It's a professional judgment, and it's not to say that if you went into the field the contour would be detected at that point. It is the best estimate based on the available data at this time. As the Navy collects more data a more accurate representation can be shown. Mr. Ogdon said he understand and agrees, but his point is that it took months to prepare the report that presents this new information, subsequently it will take a number of months to analyze this further to determine what to do next. He asked that Ms. Hannon take a look at this issue much sooner to determine if a plan of action can be implemented now to prevent the plume from migrating off-site. Mr. Zweifel said if this plume goes off-site, the "press" will know about it.

Mr. Newton said the Navy will be responsible for the cleanup no matter where the plume goes, and the "come back policy" handout on the information table explains this process

in detail. Mr. Ogdon clarified that the property south of the plume is owned by the Rancho Santiago Community College District and they have plans to immediately start construction. He reiterated that something needs to be done now to address this issue.

General Discussion

Mr. Newton said during the break he reviewed the RAB Mission Statement. He acknowledged that the Navy RAB Co-Chair is responsible for coordinating the formation of RAB subcommittees, contacting all interested participants, and making meeting arrangements. He will move forward with assisting in the formation of the RAB subcommittee. He also noted that all formal comments will need to be sent to - Darren Newton, BRAC Environmental Coordinator, BRAC Office, 7040 Trabuco Road, Irvine, California, 92618 - in order to become part of the Administrative Record. This is the official location for receiving formal comments. The 1455 Frazee Road in San Diego address is the Navy's San Diego office and is not the official address for submitting letters or comments.

Mr. Newton discussed the quarterly RAB meeting schedule for former MCAS Tustin. Currently, Tustin RAB meetings are on the same schedule as MCAS El Toro RAB meetings. Tonight's meeting provides the opportunity to schedule the Tustin RAB meetings so they do not conflict with El Toro RAB meetings and that if meetings are offset by 30 days that would be ideal. He pointed out that the Navy staff for Tustin and El Toro is one in the same – the same BEC and the same RPMs. He suggested the Tustin RAB schedule 2006 meetings for February, May, August, and November. The RAB agreed to hold the next Tustin RAB meeting on the third Wednesday of the month – February, 15, 2006, and concurred with holding future meetings in May, August, and November.

Meeting Evaluation - Don Zweifel

Mr. Zweifel asked for feedback on tonight's meeting. Ms. Arnold said Mr. Smits did a great job on his first presentation standing in for Mr. Johnson. Mr. Zweifel asked the RAB for a round of applause for Mr. Smits.

Future Topics and Meetings - Don Zweifel

Update on MTBE downgradient plume

Closing – Don Zweifel

The meeting was adjourned at 9:30 p.m. The next meeting will be February 15, 2006.

List of Handouts Provided at the Meeting

RAB Meeting Agenda/Public Notice - October 19th RAB Meeting
Meeting minutes from the July 20, 2004 (70th) RAB Meeting
MCAS Tustin Environmental Program Status
Restoration Advisory Board Fact Sheet/Membership Application
MCAS Tustin - Where to Get More Information
MCAS Tustin Marine Corps/Navy Team Contact Information (phone, e-mail)

Former MCAS Tustin RAB 10-19-05 Meeting Minutes

Internet Access - Environmental Web Sites list
For More Information (Administrative Record and Information Repository Locations)
MCAS Tustin Installation Restoration Program - Mailing List Coupon
MCAS Tustin Fact Sheet OU-1A and OU-1B, Remedial Design/Remedial Action; December 2004
Department of the Navy, "Policy for Conduction Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Statutory Five-Year Reviews, November 2001"
Department of Defense "Institutional Controls," Spring 1997.
Department of Defense "A Guide to Establishing Institutional Controls at Closing Military Installations," February 1998
The Under Secretary of Defense, "Responsibility for Additional Environmental Cleanup after Transfer of Real Property"
Department of Defense, "A Guide to Establishing Institutional Controls at Closing Military Installations"
Presentation - PCAP MTBE Treatment System, Underground Storage Tank 222

Copies of the meeting minutes and handouts provided at the October 19, 2005 RAB meeting are available at the MCAS Tustin Information Repository located at the University of California, Irvine, Main Library, Government Publications Section. Library hours are 8:00 a.m. to 7:00 p.m. Monday through Thursday; 8:00 a.m. to 5:00 p.m. Friday and Saturday; and 1:00 p.m. to 5:00 p.m. on Sunday. It is recommended, however, that people call the library for confirmation of these hours as they may be modified during exam and holiday periods. The Government Publications Section may be reached at (949) 824-7362.

Minutes from previous RAB meetings can be found on the internet at a new Navy BRAC website: www.navybracpmo.org