FORMER MARINE CORPS AIR STATION
TUSTIN RESTORATION ADVISORY BOARD MEETING
May 17, 2006
MEETING MINUTES

The 73rd Restoration Advisory Board (RAB) for the Marine Corps Air Station (MCAS) Tustin held its regular meeting on Wednesday, May 17, 2006, at the Clifton Miller Community Center in Tustin from 7:00 to 8:47 p.m. These minutes summarize the discussions and presentations from the RAB meeting.

WELCOME/INTRODUCTIONS/AGENDA REVIEW/ANNOUNCEMENTS

Mr. Darren Newton, Newton, Base Realignment and Closure (BRAC) Environmental Coordinator (BEC) and Navy RAB Co-Chair, welcomed everyone to the meeting. He asked for self-introductions of all attendees. Mr. Newton acknowledged that Mr. Don Zweifel, RAB Community Co-Chair was not present at the meeting. He said that Mr. James Ricks, U.S. EPA representative to the RAB would not be able to attend. Mr. Newton also introduced Mr. Glenn Christensen and Mr. Jim Callian, Navy Remedial Project Managers (RPMs), who recently joined the Navy's BRAC Team. Mr. Newton briefly went through the RAB meeting agenda.

Mr. Newton also referred to the RAB's Mission Statement emphasizing the purpose for the RAB. Mr. Newton reviewed the meeting agenda and said a variety of handout materials pertaining to Former MCAS Tustin are available on the information table. Contact information for the BEC/Navy RAB Co-Chair and the regulatory agency representatives is also available on the information table.

He also reminded everyone that the Administrative Record file for Former MCAS Tustin is located at the BRAC Office in Building 307 at Former MCAS El Toro. The Information Repository is located at the Main Library at University of California, Irvine. A handout on the information table provides specific location information for both of these document collections.

Mr. Newton said at the last RAB meeting held on February 22, 2006, RAB members requested that a RAB tour of the former station be conducted and a sign-up sheet was passed around. The next RAB meeting is scheduled for Wednesday, August 16, 2006 and it is possible a tour could be conducted for the RAB that day prior to holding the regular meeting. He asked when a good time would be to do a RAB tour. Since there were a limited number of RAB members present, Mr. Newton suggested holding off on planning of the tour. Also, at the last RAB meeting, it was suggested that executive summaries of reports and documents be provided to RAB members via email or regular mail. Mr. Newton said there have not been any significant documents recently and that the Navy was working on how to best provide executive summaries to RAB members.

Mr. Newton discussed the Navy's "Comeback Policy" and described how the Navy would come back to Former MCAS Tustin to cleanup property after transfer if contamination associated with Marine Corps operations is found. He said during the groundwater monitoring effort for Operable Unit (OU) 4B, it was determined that a groundwater samples were mistakenly collected approximately 10 feet from the Navy's property boundary on property owned by the City of Tustin and sampling results indicated a

detection of contamination in the groundwater. On April 24, 2006, the Navy notified the owners of the property (City of Tustin) that the contamination is associated with the presence of the plume in groundwater at IRP Site 6; and the chemical detected is a volatile organic compound (VOC), specifically, 1,1-dichloroethane (1,1-DCE). The Navy is coordinating with the City of Tustin to access this property to further sample the area to characterize and delineate this contamination. This sampling effort will start in summer 2006 and is expected be completed in spring 2007. This comeback effort is a follow-up to the sampling conducted in 2005 and the evaluation done in 2006.

Mr. Newton explained that all hazardous waste investigation and cleanup the Navy conducts is based on the federal Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and the Navy's Installation Restoration Program. CERCLA requires that a deed for transferring federal property contain a covenant that all remedial action necessary to protect human health and the environment has been taken, and that the United States shall conduct any additional remedial action "found to be necessary" after transfer. The covenant is the promise that all necessary action has been taken, and that the Navy shall conduct any additional remedial action "found to be necessary" after property transfer. He also explained the **c**ircumstances under which the Department of Defense (DoD) and the Navy would return to conduct additional cleanup and when the Navy would not return to do additional cleanup. Mr. Newton read the lead sentences of the following sections of the Comeback Policy that states:

> *"Circumstances Under Which DoD Would Return to do Additional Cleanup. A determination may be made in the future that the selected remedy is no longer protective of human health and the environment because the remedy failed to perform as expected, or because an institutional control has proven to be ineffective, or because there has been a subsequent discovery of additional contamination attributable to DoD activities."*
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> *"Circumstances Under Which DoD Would Not Return to do Additional Cleanup. Where additional remedial action is required only to facilitate a use prohibited by deed restriction or other appropriate institutional control, DoD will neither perform nor pay for such additional remediation."*

Mr. Harry Tackach, RAB meeting attendee, Orion Environmental consultant to Tustin Legacy Community Partners, asked for a clarification about hazardous waste and petroleum contamination. Mr. Newton said that petroleum is not included as a hazardous waste under CERCLA since petroleum constituents that comprise fuels, in total compounds are not hazardous. Mr. Tim Heironimus, Project Manager with Bechtel, a Navy contractor, further explained that petroleum is excluded specifically from CERCLA but would be cleaned up as part of the deed transfer.

Mr. Harry Moore, RAB meeting attendee, Twining Labs consultant to Vestar, asked what the Navy's position would be if a plume of contamination migrates under a building after it is constructed. He also asked if indoor air quality issues would be addressed. Mr. Newton said the Navy would characterize the plume and if the plume migrated the Navy would be responsible. He added that the Navy would protect human health and the environment. Mr. Moore also asked for the Navy to clarify on what the procedure would be. Mr. Newton said such procedures would be part of the remedial design that would prevent the plumes from migrating. Mr. Heironimus said regarding the plumes where the feasibility studies and human health risk assessments have been completed, at this

time, there are no unacceptable risks to vapors. Ms. Susan Reynolds, RAB member, asked how such sampling was conducted beyond the Navy's property boundary, and if sampling was conducted elsewhere would further contamination be detected. Mr. Newton said a mistake by the field crew was made and this is the only such known occurrence. The detection of 1,1-DCE was from screening data that serves as a qualitative tool for determining the presence of a contaminant. The Navy needs to determine why this detection occurred. By going back to further sample and conduct laboratory analysis the Navy can determine if the screening data is accurate.

Mr. Newton said the Navy was issued a new National Pollutant Discharge Elimination System (NPDES) permit by the Regional Water Quality Control Board (RWQCB), Santa Ana Region. Mr. Newton said the new permit that recently went into effect provides revised discharge limits for the storm water drainage system. Mr. Patricia Hannon, RWQCB Project Manager, said the Navy had been discharging under a general discharge permit for solvents and other constituents. However, other chemicals, such as 1,2,3-trichloropropane (1,2,3-TCP) were not part of the general discharge permit and new requirements were also needed for nitrates, selenium, and total dissolved solids. Currently, the Petroleum Corrective Action Plan (PCAP) groundwater remediation system at the Former MCAS Tustin discharges treated water to the storm drains.

Ms. Hannon said this permit is more stringent than the previous general discharge permit for groundwater remediation. She said the new permit better represents the conditions at former MCAS Tustin and it is tailored to address those conditions. The new permit contains a comprehensive compliance schedule that details the steps the Navy will take in order to be compliance with the new permit.

Text of the new permit can be found on the RWQCB website at:
http://www.waterboards.ca.gov/santaana/html/2006_orders.html - click on order number R8-2006-0017 - WASTE DISCHARGE REQUIREMENTS FOR THE UNITED STATES DEPARTMENT OF THE NAVY FORMER MARINE CORPS AIR STATION TUSTIN DISCHARGE TO PETERS CANYON WASH IN THE SAN DIEGO CREEK/NEWPORT BAY WATERSHED, CA8000404.

OLD BUSINESS

Approval of 2/22/06 RAB Meeting Minutes – Darren Newton

Mr. Newton asked for any changes or comments prior to approval of the February 22, 2006 RAB Meeting Minutes. The meeting minutes were accepted without amendment.

NEW BUSINESS

Installation Restoration Program (IRP) Status Update – Darren Newton

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 Draft Annual Time Critical Removal Action (TCRA) Performance Report was submitted April 11, 2006 for regulatory agency review. The documents states that the plume has been contained. The draft final report will be completed following the June 12, 2006 due date for regulatory agency comments. The Draft Remedial Design was completed in June 2005. The next steps will be to

complete the Draft Final Remedial Design in June 2006. The groundwater treatment system is expected to be operating in 2007. The Operating Properly and Successfully (OPS) Report is scheduled for completion in 2008.

For OU-1B, the Draft Soil Removal Report was completed in October 2005. The Draft Final Soil Removal Report was submitted for regulatory agency review on March 29, 2006. The Navy does not anticipate any issues and the Final Soil Removal Report is scheduled to be completed in spring 2006. The Final Groundwater Remedial Design is expected to be completed in summer 2006. It is anticipated that the treatment system will be operating in 2007 with the OPS Report scheduled for completion in 2008.

OU-4 (IRP-6, IRP-5S(a), IRP-11 [Areas B and C], IRP-13W, MMS-04 [Area B] – Mr. Newton said OU-4A is complete and will no longer be discussed. For OU-4B, the Navy submitted the Final Addendum to the Work Plan for the aquifer test at IRP-5S(a) on May 10, 2006 and expects to conduct the aquifer test in summer 2006 starting in July. Additional sampling at IRP-6 and the mingled plumes area is scheduled for summer 2006.

MTBE (methyl tert-butyl ether) Groundwater Plume (Underground Storage Tank [UST] Site 222) – The Navy submitted the Draft Soil Closure Report in November 2005 to the regulatory agencies. The Final Soil Closure Report was submitted to regulatory agencies on April 7, 2006. A technical memorandum for the delineation of downgradient MTBE was submitted to the regulatory agencies on May 15, 2006. Mr. Newton added that a presentation on this was made at the February 22, 2006 RAB meeting and the plume has not crossed the Navy property boundary. The document covers the data obtained from January and February 2006. The next steps include completing Interim PCAP Addendum No. 2 document the week of May 22, 2006. Also, the Navy will evaluate downgradient portions of the plume and have a work plan addendum for delineation activities in July 2006. The Final PCAP will be underway following completion of the work plan.

Mr. Newton said the HiPOx system has treated over 108 million gallons of MTBE-contaminated water since August 2001. The treatment system was shutdown in April 2006 for a swap out of equipment since the system is now switching to a granular activated carbon or GAC system to remove MTBE. The Navy now needs a treatment system that can effectively treat concentrations of MTBE that ranges from 300 to 900 parts per billion (ppb). The HiPOx system was designed to treat MTBE concentrations in the tens of thousands ppb and system performance was very successful at treating such high concentrations of MTBE. The system with the new GAC components will be back online by the end of June 2006.

Regulatory Agency Comment Update - Regulatory Agency Representatives

Mr. Newton reiterated that Mr. James Ricks, U.S. EPA was unable to attend tonight's RAB meeting.

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

Mr. Peddada said that Lennar is interested in an early transfer of 4.8 acres that comprise the remaining portion of Carve-out 24 where IRP-13S (1,2,3-TCP plume) and IRP-13W (TCE plume) are located. The Navy has prepared a Draft Finding of Suitability for Early Transfer (FOSET) and DTSC has provided comments on that document. The Navy has issued Responses to Comments (RTCs) for regulatory agency review and DTSC will respond back to the Navy on the RTCs during the week of May 22, 2006. Mr. Peddada explained that early transfer is a complicated and lengthy process that involves a number of authorities but ultimately Governor Schwarzenegger's participation is essential since he is the final authority and his approval is required in such matters. The process also requires determining requirements of what the future homeowners can and cannot do on the property.

Mr. Newton said at the last RAB meeting he presented the letter Lennar provided to the Navy requesting an early transfer of the last portion of Carve-out 24. He added that completing the FOSET would most likely occur during mid-July 2006. Lennar has requested the Navy retain responsibility of the environmental restoration. Mr. Peddada reaffirmed that there are no issues with the soil at the site, and the Navy is only focusing on cleanup of the groundwater. Mr. Callian added that concentrations of TCE, the primary contaminant at IRP-13W, are below 20 micrograms per liter (g/L).

Patricia Hannon, Project Manager, Regional Water Quality Control Board, Santa Ana Region

Ms. Hannon said she has been working on a number of issues and has completed reviewing the Draft Soil Closure Report for UST 222, and granted her concurrence. She spent a lot of her time working on the new NPDES discharge permit that was adopted by the RWQCB. For the OU-1B Draft Soil Removal Report she submitted a few comments that have since been resolved. Ms. Hannon reviewed the Finding of Suitability to Transfer (FOST) 8 for Carve-outs 1 and 4. She said she is currently reviewing the groundwater monitoring reports for OU-3, IRP-3, IRP-6, IRP-12, IRP 13S, and UST 222.

Presentation -- *Status Update on OU-4B Revised Draft Feasibility Study and Supplemental Investigations for IRP Site 6 and Mingled Plumes Area*

Mr. Callian, Navy RPM, is responsible for these sites. He said OU-4B is made up of six sites (IRP-5S(a), IRP-6, IRP-11, IRP-13W, MMS-04, and the mingled plumes area). He explained that IRP-5Sa is a drainage area and IRP-6 was a paint locker and drum storage area. IRP-11 and IRP-13-W were drum storage areas and MMS-04 is the old automotive shop. The mingled plumes area has five areas of concern. The six sites are generally separated into two sections, sites with low concentrations (IRP-11, IRP-13-W, MMS-04) and sites with high concentrations of contaminants (IRP-5S(a), IRP-6, mingled plumes area). He explained that low concentration sites contain VOCs that are detected at less than 20 g/L or 20 ppb. At IRP-5S(a), concentrations range from 300 to 350 g/L.

These are the only sites left being investigated under the Installation Restoration Program and groundwater is the only concern. TCE, which is categorized as a VOC, is

the primary contaminant found in groundwater at these sites, except for IRP-6 where 1,1-DCE is the primary contaminant. A Draft Feasibility Study (FS) Report was issued for the OU-4B sites in August 2005 for regulatory agency review. Agency comments were received in October 2005. Based on the review of all project data and comments received, the Navy determined it was necessary to collect additional data and prepare a Revised Draft FS Report.

Additional data for inclusion in the Revised Draft FS Report will include results from the following activities:

Supplemental Investigation at IRP-6 and the MPA.
Aquifer testing at IRP-5S(a) where an evaluation of the water-bearing properties of the aquifer will be used in groundwater modeling.
Microcosm study will be completed at IRP 5S(a) to evaluate the potential activity of natural microorganisms (bacteria) in the cleanup of VOCs. This effort will help determine if *in-situ* treatment is feasible.
Revised human-health risk assessment for all OU-4B sites.
Recalibration of groundwater modeling for OU-4B sites.

Mr. Callian introduced Mr. Tim Heironimus Project Manager with Bechtel, a Navy contractor, who will discuss the OU-4B FS effort. Mr. Heironimus explained that the purpose of conducting the OU-4B FS includes a host of items but the primary objective is to identify remedial action objectives for the cleanup of the contaminated groundwater to protect human health and the environment. Based on those objectives, remedial action alternatives are developed to clean up the groundwater. Those alternatives will then be further developed and evaluated to determine if they achieve the stated objectives. The OU-4B FS will be used to select the most appropriate remedies for groundwater at the OU-4B sites.

Mr. Heironimus said that currently, as presented in the Draft FS Report, five alternatives have been developed to address groundwater contamination at the various sites. The Navy is in the process of incorporating more data and information on the sites. It is possible another alternative may be developed. After the FS Report process is completed the Navy's preferred and recommended alternative will be presented in a Proposed Plan document that is distributed to inform the community about the remedial alternatives and to obtain public comment.

Mr. Moore asked why a new human-health risk assessment is being conducted, and if this will supplement the previous risk-based assessment. Mr. Heironimus explained that the new assessment will provide new data to supplement the previous assessment. It will include modeling based on soil-gas data and incorporate results of the Johnson-Ettinger model favored by U.S. EPA to determine indoor air risk. These data will be incorporated into the risk assessment, and it is likely that the risk assessment results will not change very much. Mr. Heironimus clarified that the way the Navy handles indoor air risk assessment is to model the volatilization through the soil zone into a building using soil-gas data and the Johnson-Ettinger model.

Mr. Heironimus said the work plan is a work in progress and is currently undergoing review by the Navy. He provided an overview of the supplemental investigation effort. For IRP-6, 1,1-DCE and TCE concentrations in the 1st water-bearing zone (WBZ) exceed the maximum contaminant levels (MCLs), 6.0 g/L for 1,1-DCE and 5.0 g/L for

TCE. The Navy will delineate the lateral extent of 1,1-DCE and TCE in the 1st WBZ. This will involve installation and sampling of additional monitoring wells to provide repeatable long-term monitoring data. They propose to collect soil samples for physical properties to be used in groundwater modeling. The Navy will also verify the groundwater sampling results from April 2005 and April 2006. To help the RAB understand the current status of IRP-6, results of data collection from 1996 hydropunch locations, monitoring wells from December 2005, and preliminary screening hydropunch data from 2005 were shown in the presentation slides. The data that is shown in blue are hydropunch data from 1996 and the purple is from 2005. The green triangles are the samples taken and the one that is outside of the carve-out area. Mr. Callian said some preliminary locations for the new wells and sampling are undergoing regulatory agency review. Depending on what is detected at HP-03 (the area 10 to 15 feet beyond the Navy property boundary); decisions to "step-out" and sample will be based on those results.

For the mingled plumes area, this area is fairly well defined and the only contaminant of concern is TCE. Concentrations of TCE throughout the mingled plumes area are fairly low and are only present in the 1st WBZ and exceed the MCL. The Navy proposes to collect samples to confirm that TCE has not migrated from the 1st to the 2nd WBZ. Slides presented to the RAB show hydropunch samplings locations and results from 2003 and this includes those from the toe of the plume in the 1st WBZ. Sampling results in the 1st WBZ range from non-detect to 45.0 g/L. In a deeper hydropunch sample in the 2nd WBZ, a low concentration of TCE was detected at 0.14 g/L. At a second hydropunch sample location there was no detection of TCE in the sample collected in the 2nd WBZ. An important part of the supplemental investigation will be to determine if there is TCE present in the 2nd WBZ.

In regard to the aquifer testing at IRP-5S(a), they Navy wants to obtain data about the physical and water-bearing properties of the shallow aquifer - the area of influence of the wells, quality of the groundwater coming out of the wells and if it changes. The general scope of work includes installing two extraction wells to be used in testing. Two 1-day tests will be performed to establish sustainable long-term extraction rates. This will be followed by two long-term extraction tests for a minimum of 3 days. Groundwater sampling will be conducted prior to and during the test to track changes in groundwater quality. Extracted water will be transported to the on-site treatment system for treatment and disposal.

Schedule

The schedule for OU4-B FS was presented and includes:

> July 2006 – the Navy will issue a final work plan for the Supplemental Investigation at IRP-6 and the mingled plumes area.
> Summer 2006 – Conduct Supplemental Investigation and aquifer testing at IRP 5S(a).
> Fall 2006 – Issue Revised Draft OU-4B FS Report for regulatory agency review.

Discussion

Mr. Moore asked if a pump and treat remedy is selected, how much would that drop the water table? Mr. Moore asked this question because developers are concerned about settling of buildings. Mr. Heironimus said the Navy is looking more towards hydraulic

containment that keeps the water table primarily static. Mr. Callian said pump and treat remedies generally remove a lot of groundwater, however it is typically not efficient or cost effective. Hydraulic containment involves extracting and treating groundwater in a manner that does not allow a plume to migrate. The plume is present only in the 1st WBZ at a depth of about 25 feet below ground surface. The 2nd WBZ has been historically nondetect. Hydropunch sampling at the toe of the plume will be conducted to check migration in the 1st and 2nd WBZs.

Mr. Moore asked if during the Navy's upcoming sampling efforts if "step out" sampling on the other side of the carve-out will be performed. Mr. Callian said that is not the intention at this time, but depending upon sampling results that is a possibility. A mobile laboratory is proposed to be used so conducting step out sampling can be performed as needed.

General Discussion

Mr. Newton said there was interest in a forming a RAB Subcommittee for the OU-4B Revised Draft FS Report. It was agreed at the last RAB meeting that formation of the RAB Subcommittee for review and discussion of this report would occur in the fall after the document is submitted to the regulatory agencies.

Future Topics and Meetings

No suggestions for future RAB meeting presentation topics were provided. The next meeting will be held Wednesday, August 16, 2006 at the Clifton Miller Community Center.

Closing

Mr. Newton adjourned the meeting at 8:47 p.m.

List of Handouts Provided at the Meeting

RAB Meeting Agenda/Public Notice – May 17, 2006 (73rd) RAB Meeting.
Meeting minutes from the February 22, 2006 (72nd) RAB Meeting.
MCAS Tustin Environmental Program Status.
Environmental Program Summary Table.
Map – MCAS Tustin Operable Units, Major AOCs, and MTBE Plume.
Restoration Advisory Board Fact Sheet/Membership Application.
MCAS Tustin - Where to Get More Information.
MCAS Tustin Marine Corps/Navy Team Contact Information.
For More Information: Administrative Record and Information Repository Locations.
MCAS Tustin Installation Restoration Program - Mailing List Coupon.
MCAS Tustin Restoration Advisory Board Mission Statement.
MCAS Tustin Fact Sheet OU-1A and OU-1B and Arsenic AOC Cleanup Activities; February 2004.
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."
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.”
Department of Defense, “Institutional Controls: What Are They and How Are They Used.”
Presentation - Status Update on OU-4B Revised Draft Feasibility Study and Supplemental Investigations for IRP Sites 5S(a), 6, 11 13W and MMS-04.

Copies of the meeting minutes and handouts provided at the May 17, 2006 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 on the Navy BRAC website: www.navybracpmo.mil