

**FORMER MARINE CORPS AIR STATION
TUSTIN RESTORATION ADVISORY BOARD MEETING
August 15, 2007
FINAL MEETING MINUTES**

The 78th Restoration Advisory Board (RAB) for former Marine Corps Air Station (MCAS) Tustin held its regular meeting on Wednesday, August 15, 2007, at the Clifton Miller Community Center in Tustin. The meeting started at 7:07 p.m. and was adjourned at 9:07 p.m. These minutes summarize the discussions and presentations from the RAB meeting.

WELCOME/INTRODUCTIONS/AGENDA REVIEW

Mr. Don Zweifel, RAB Community Co-Chair, welcomed everyone and thanked them for coming to tonight's RAB meeting. He said there were no excused absences from RAB members. He then asked for self-introductions of all attendees.

Mr. Rick Weissenborn introduced himself as the Base Realignment and Closure (BRAC) Environmental Coordinator (BEC) and Navy RAB Co-Chair. He stated that he has also served at Alameda, Treasure Island, and Hunter's Point. He mentioned that he has been the BEC since May 2007 but was unable to attend the last RAB meeting. He also welcomed everyone to the meeting.

Mr. Weissenborn said a variety of handout materials pertaining to former MCAS Tustin were available on the information table. He reviewed the RAB meeting agenda. The key topics for this RAB meeting were the Environmental Status Update and the presentation "Status Update on the Supplemental Investigations at Installation Restoration Program (IRP) Site 6 and the Mingled Plumes Area (MPA)."

Mr. Weissenborn said he would be using a Power Point presentation to present the Environmental Status Update and from now on a computer projector would be used instead of an overhead projector. He referred to the RAB Mission Statement stating that the purpose of the RAB is *"...to promote effective and efficient cleanup that results in the protection of human health and the environment, and to increase community awareness of the dissemination of information by serving as the conduit between the community and the regulatory agencies."* He mentioned that from this point on he would no longer refer to the RAB Mission Statement. He added that the RAB meeting provides an opportunity for the community to receive input from the Navy and the regulatory agencies.

Mr. Weissenborn said that the RAB meeting schedule for 2008 will be discussed at the next RAB meeting on November 14, 2007.

He reminded RAB members and others in attendance that any correspondence sent to the Navy needs to be addressed to the BEC and mailed to the BRAC Office at former MCAS El Toro. The complete address is:

Base Realignment and Closure
Former MCAS El Toro
Attn: Mr. Rick Weissenborn, BRAC Environmental Coordinator
RE: Former MCAS Tustin
7040 Trabuco Road
Irvine, CA 92618

He also informed meeting attendees he can be contacted by phone or email regarding any questions that may arise and that this also pertains to the regulatory agency representatives. He added that all Navy-produced documents undergo regulatory agency review. The Administrative Record file for former MCAS Tustin, where all project-related documents are housed, is located at the BRAC Office in Building 307 at former MCAS El Toro. The Information Repository, a subset of the Administrative Record file, is located at the Main Library at University of California, Irvine. A handout on the information table provides specific location information.

OLD BUSINESS

Approval of 5/16/07 RAB Meeting Minutes – Mr. Don Zweifel, MCAS Tustin RAB Community Co-Chair

Mr. Zweifel asked if anyone had any amendments to the RAB meeting minutes. There were no objections or changes to the minutes. The minutes were approved without amendment by the RAB.

NEW BUSINESS

Installation Restoration Program Environmental Status Update

Mr. Weissenborn provided the former MCAS Tustin Environmental Status Update. He said the handout was formatted differently to highlight: 1) key activities performed since May 2007; and 2) specific activities the Navy plans to conduct through November 2007.

- For Operable Unit (OU)-1A, the Navy submitted the Draft 2006 Annual Time-Critical Removal Action (TCRA) Performance Report in May 2007. A remedial design/remedial action fact sheet for groundwater cleanup (which also covered OU-1B) was issued in June 2007. The final remedial design for OU-1A groundwater cleanup (it also includes OU-1B) was also completed in June 2007. Additionally, four extraction wells and 18 monitoring wells have been installed and developed. The pipeline installation has been completed. Startup of the system (includes OU-1B) is anticipated to occur in November 2007.
- For OU-1B, the remedial design/remedial action fact sheet was issued in June 2007. The final remedial design was completed in June 2007. Seven extraction wells and 13 monitoring wells were installed and the pipeline installation is underway. System startup is anticipated for November 2007.
- For OU-4B, the Phase III additional supplemental investigations were conducted at IRP-6 and the MPA in July 2007. A 45-day infiltration test was completed for the methyl tert-butyl ether (MTBE) plume system. During the infiltration test, groundwater treated to remove MTBE was reinjected for infiltration back into the ground. The Final Petroleum Corrective Action Plan (PCAP) documentation was issued in July 2007. The piping and electrical rerouting from the original PCAP system to the new PCAP system is 70 percent complete. The Navy plans to implement PCAP system startup beginning in September 2007.
- For activities through November 2007, the Navy is scheduled to complete the OU-1A/OU-1B remedial action system for groundwater cleanup. Additionally, the Navy will evaluate the IRP-6 and the MPA Supplemental Investigation results in

order to prepare the Revised Draft Feasibility Study (FS). The existing MTBE plume system will be shut down on August 20, 2007 and the new system will start up on August 27, 2007 for shakedown activities. The Navy will install two extraction wells in September. The air sparging/soil vapor extraction pilot test will be conducted in September 2007. Additionally, the piping being installed is approximately 80 percent complete and the Navy expects the system to be operational in the November/December 2007 timeframe.

Mr. Chris Crompton, RAB member, asked about the difference between the old MTBE system and the newly installed system. Mr. Louie Cardinale, Navy Remedial Project Manager (RPM), stated that the two new systems (TCRA and MTBE) have been relocated to a new pad. The new MTBE system includes the addition of two extraction wells and the use of air sparging.

Ms. Mary Lynn Norby, RAB member, asked if the new location would free up the use of the old location. Ms. Content Arnold, Navy Lead RPM, stated that the old location would be available for other uses after cleanup is complete.

Ms. Norby also requested that a copy of the June 2007 remedial design/remedial action fact sheet be sent to her. The Navy acknowledged her request.

Mr. Zweifel commented that a tour to observe the new systems would be beneficial to the RAB members. Mr. Weissenborn replied that currently there is not a lot of activity; however, he will work on setting up a tour possibly in the January 2008 timeframe.

Regulatory Agency Update - Regulatory Agency Representatives

Mr. Ram Peddada, Project Manager, Cal/EPA Department of Toxic Substance Control

Mr. Peddada, Department of Toxic Substances Control (DTSC), briefly went over the reports and documents that the agency had reviewed since the last RAB meeting. He recently reviewed the remedial design document for OU-1A and OU-1B and DTSC concurred with the design. The Navy is currently installing the groundwater cleanup system.

Mr. Peddada explained that DTSC is the primary regulatory oversight agency for former MCAS Tustin since it is not a National Priorities List site. In this role, for the past two months, DTSC has been working on a Finding of Suitability for Early Transfer (FOSET). The FOSET pertains to Lennar's request to transfer 4.8 acres in the vicinity of IRP Sites 13S and 13W. The groundwater at these sites is contaminated with the volatile organic contaminants (VOCs) 1,2-dichloroethene (1,2-DCE) and trichloroethene (TCE). Contaminated soil at these sites has been removed and remaining soil at the site is clean.

The Navy responded to a letter issued by Lennar requesting the early transfer of the 4.8 acres. The response is composed of the FOSET documentation prepared by the Navy. The FOSET was completed by the Navy in July 2007 and issued to DTSC. Input from the regulatory agencies on the former MCAS Tustin BRAC Cleanup Team (DTSC, U.S. Environmental Protection Agency [U.S. EPA], and Regional Water Quality Control Board, Santa Region [Water Board]) was incorporated into the FOSET. DTSC has since reviewed the FOSET and incorporated additional changes and submitted the documentation to Ms. Linda Adams, Secretary of Environmental Protection for Cal/EPA.

The FOSET package was then submitted to the governor for signing. Once the package is signed-off by the governor, the property will be transferred from the Navy to Lennar.

Mr. Zweifel asked Mr. Peddada to show the RAB on the aerial map where the FOSET property is located. Mr. Peddada did so, and explained that Lennar plans on building 87 residences in the 4.8-acre area.

Ms. Patricia Hannon, Project Manager, Water Board

Ms. Hannon, Water Board, stated that since the last RAB meeting she reviewed the Draft 2006 Annual TCRA Performance Evaluation Report for OU-1A South, and had only minor comments on the report.

She also reviewed the Draft 2006 Annual Groundwater Monitoring Report for OU-3 and had no comments. Additionally, she reviewed the Draft Annual 2006 Groundwater Monitoring Report for OU-1B, OU-4B, and the MPA. Her comments on this document pertained to the need to upload the data to the state's GeoTracker web site. At the GeoTracker web site, the public can view data from former MCAS Tustin sites as well as numerous other sites located throughout California. GeoTracker is available at: www.geotracker.waterboard.ca.gov

Ms. Hannon also reviewed the Final Technical Memorandum for Phase II Delineation of the Downgradient Extent of the MTBE Plume at underground storage tank (UST) 222. The Water Board had no comments on this document. In June 2007, the Water Board reviewed the Draft Work Plan for Destruction of Inactive Monitoring Wells at selected sites and provided comments in July 2007 concerning the schedule and technical specifications.

Additionally, the Water Board assessed UST 222 Draft Field Change justification for activities to move the treatment plant. Ms. Hannon showed on the former MCAS Tustin aerial map where UST 222 was located. The Annual System Performance Report for UST 222 was reviewed by Ms. Hannon. She requested that the Navy provide the aquatic toxicity testing data for two species. In July 2007, Water Board reviewed the Quarterly Groundwater Progress Monitoring Data Summary for OU-1A and UST 222. No comments were provided by the agency.

Mr. Zweifel asked about selenium in the Peter's Canyon wash area. Ms. Hannon informed the RAB that the Navy received a permit from Orange County Sanitation District to discharge treated water that contains selenium to the sanitary sewer starting in September 2007; therefore, discharge of this water to the storm drain has been discontinued.

Presentation – Status Update on the Supplemental Investigations at IRP Site 6 and the Mingled Plumes Area (MPA)

Mr. Jim Callian, Navy RPM, and Mr. Tim Heironimus, Bechtel Project Manager, gave the presentation. The purpose of the presentation was to update RAB members regarding field activities completed since May 2007 and it highlighted the results of Phase III field activities.

The presentation overview covered background information on IRP-6 and the MPA, the purpose of the supplemental investigations, a summary of field activities, conclusions

reached, and the schedule of future activities. Additionally, a list of acronyms and abbreviations was provided in the presentation handout.

Mr. Callian showed a photo of the former MCAS Tustin base that highlighted the locations of IRP-6 and the MPA. Background information for IRP-6 was explained in detail. From 1972-1981, IRP-6 operated as a paint locker and drum storage area. Specifically, Building 250 served as a receiving and distribution center. The primary chemicals of concern (COCs) for groundwater are the VOCs 1,1-dichloroethene (1,1-DCE) and TCE. These VOCs exceed maximum contaminant levels (MCLs) in the 1st water-bearing zone (1st WBZ).

The purpose of the investigation for IRP-6 groundwater is to delineate the extent of 1,1-DCE and TCE that is above the MCLs in the 1st WBZ, and evaluate the potential downward migration of VOCs from the 1st WBZ to the 2nd WBZ at four separate locations. Additionally, installation of monitoring wells in the 1st WBZ would provide for tracking of potential plume migration, concentration trends, and groundwater flow directions over time. Verification of previous preliminary data results gathered from April 2005 to April 2006 is also of key importance. For IRP-6 soil, the evaluation of whether VOCs in soil are a continuing source of groundwater contamination at four specific locations is also most important.

The presentation also covered two sampling tools used in the field for the supplemental investigation: the HydroPunch™ method and traditional monitoring wells. The HydroPunch™ method is a “quick-and-dirty” screening tool that allows the Navy to determine with a single-shot approach the concentrations of contaminants at specific elevations in groundwater. Traditional groundwater sampling provides the Navy better, long-term data that include dissolved concentrations from the various water samples. It was pointed out that sometimes HydroPunch™ methods yield positively biased results due to the method of evaluating both the dissolved concentrations and the sediment in the same water sample. However, monitoring wells are constructed with a filter pack around the casing and groundwater is pumped at a low flow rate (1/10 of a liter per minute) to collect samples that are free of turbidity and sediment.

A series of maps of the IRP-6 Phase I, II, and III investigation areas and the sampling locations was shown to the RAB members. Field work was conducted from February 27, 2007 through July 19, 2007. Phases I and II included 82 HydroPunch™ samples in the 1st WBZ collected at 25 feet below ground surface (bgs), four HydroPunch™ samples in the 2nd WBZ collected at 44 feet bgs, and four soil samples collected from the 1st WBZ. Phase III included five HydroPunch™ samples, five temporary HydroPunch™ wells, and samples from three monitoring wells all located within the 1st WBZ.

A series of photos at IRP-6 showed the HydroPunch™ sampling equipment. Mr. Callian explained that the hydraulic ram of the HydroPunch™ has a 1 ½-inch diameter probe located on the back of the truck. A hydraulic ram and the weight of the truck pushes the probe down into the ground and water and sediment samples are collected. A 2-inch diameter HydroPunch™ probe was also shown. Mobile labs, located on-site, were used to quickly obtain sampling results. A photo was shown of the space restrictions placed upon HydroPunch™ sampling due to redevelopment construction currently being conducted.

The objective of the investigation of the main IRP-6 plume was to determine its extent to the west. A map of IRP-6 west of the carve-out area was shown. The green dots on the map represented locations of groundwater samples which contained TCE and 1,1-DCE

at concentrations greater than the MCLs, and the yellow dots represented groundwater sampling locations where concentrations of TCE exceeded the MCL.

Mr. Callian explained that the Navy placed five HydroPunch™ probes overnight to determine the elevation and flow direction of groundwater. These data provided information to locate and install monitoring wells to monitor groundwater conditions.

Conclusions from the IRP-6 supplemental investigation included the following findings:

- The groundwater flow direction is south to southeast.
- The extent of 1,1-DCE and TCE is delineated in the 1st WBZ.
- The 2nd WBZ has not been impacted by VOCs.
- The permanent well data southeast of the carve-out boundary indicates that 1,1-DCE and TCE are below the MCLs.

Mr. Heironimus took the lead on presenting information on the MPA supplemental investigation. A map of the OU-4B sites including a view of the plumes from multiple areas was shown. The MPA is comprised of five areas of concern (AOCs): DSS-01, DSS-02, MDA-02, MMS-05, and ST-67. The primary COC is TCE which exceeds the MCL in the 1st WBZ. The purpose of the investigation is to evaluate whether TCE has migrated into the 2nd WBZ at three locations.

A map of the plume and the three sampling locations was shown. Phases I through III of the MPA field work was conducted from February 27, 2007 through July 27, 2007. HydroPunch™ samples were taken from the 2nd WBZ (44 to 66 feet bgs) at 11 locations, one HydroPunch™ sample was collected from the 3rd WBZ at 85 feet bgs, and three permanent monitoring wells were installed at the 2nd WBZ at 48 feet bgs.

A map of the plumes showing the 2nd WBZ from Phases I and II of the supplemental investigation was presented. Exceedances of TCE were found during this portion of the investigation which led to further analysis in Phase III. The Navy collected continuous cores using sonic drilling. This step allowed geologists to examine and determine what type of subsurface material was present in the 2nd WBZ.

Additional photos of Phases I, II, and III field work were shown. Mr. Heironimus explained how the Navy conducted “step-outs” to delineate the lateral extent of TCE present in the 2nd WBZ. HydroPunch™ samples were also collected to evaluate the vertical extent. TCE was found in the 3rd WBZ but levels were below the MCL for TCE. Mr. Heironimus presented the conclusions for MPA:

- The extent of TCE has been delineated in the 2nd WBZ.
- The 3rd WBZ is not impacted by TCE above the MCLs.

Schedule

Mr. Callian said the Navy is currently in the process of preparing the Revised Draft FS Report. This includes the preparation of a Summary Letter Report documenting the completion of groundwater monitoring, revision of human-health risk assessments, reevaluation of the remedial alternatives, and incorporating agency comments on the Draft FS Report.

- From February 20, 2008 through April 21, 2008, the various agencies will review the Revised Draft FS Report (60 days).
- The Navy plans to address and incorporate agency comments in the Draft Final FS Report from April 22, 2008 through June 20, 2008.
- Agency review of the Draft Final FS Report is scheduled for June 23, 2008 through July 22, 2008.

Discussion

Mr. Harry Takach, RAB member, asked why further investigation of the main plume and two other areas was conducted. Mr. Callian replied further investigation was required due to preliminary data gathered by an environmental consultant hired by the developers, which indicated four exceedances of MCLs. Based on these data, the Navy conducted a follow-up investigation to confirm the analytical results. Three phases of the supplemental investigation were needed to fully understand these areas.

Mr. Zweifel questioned the effectiveness of the HydroPunch™ sampling and validity of data results. Mr. Callian explained that HydroPunch™ is a one-shot chance to obtain samples, but is thought to be the most effective and efficient way to delineate the area for placement of monitoring wells. The groundwater samples from the monitoring wells measure the dissolved concentration of contaminant.

Ms. Norby asked why the Navy had allowed a portion of the site to go to development when there was still a need to go back and conduct further investigations. Mr. Callian replied that the Navy was unaware of this contamination until the developer found the contamination. Therefore, the Navy was required to come back and investigate this site because the Department of Defense Comeback Policy mandates such action.

Ms. Arnold explained that the conducting of the three phases of the supplemental investigation allowed the Navy to determine that the groundwater samples from areas outside of the carve-outs showed that the results for COCs were well below the MCLs or were non-detectable. Groundwater contamination in these areas has been defined and this information will be incorporated and discussed in the Revised Draft FS Report. Mr. Heironimus detailed how soils at the site were heavily impacted in 1995 and 1996. The Navy was never able to define the source where the plume originated. The original source could have been in the groundwater.

Mr. Zweifel mentioned the need for a toxicologist to be present at a future RAB meeting. Mr. Weissenborn indicated that Ms. Linda Henry, toxicologist with Brown and Caldwell, would be requested to make a general presentation on human-health risks assessments to the RAB.

Mr. Zweifel also inquired about sonic drilling mentioned in the presentation. Ms. Hannon explained that the pipe has a solid casing on the outside and is hollow on the inside. The pipe vibrates and turns at the same time as it is pushed down into the ground.

RAB members commented that the presentation was very good and the detail provided was appreciated.

Future Topics/Schedule Next RAB and Subcommittee Meetings/Meeting Evaluation and Closing

The RAB requested that the following topics be covered at upcoming RAB meetings:

- Human-health risks assessment presentation
- Update from City of Tustin regarding redevelopment
- City of Tustin's comments on environmental cleanup that is being done as it relates to the redevelopment
- Navy's budget for cleanup
- Annual Groundwater Report

The next RAB meeting is scheduled for November 14, 2007.

Additional Discussion

Ms. Norby requested that one-page summaries of documents be provided to the RAB or that RAB members should be able to receive reports and documents. Ms. Arnold said there is not a standing order to mail documents to RAB members, and a sign-up sheet was used in the past for those interested. Since there was no interest in receiving documents, the RAB Co-Chair receives all documents. Ms. Norby expressed interest in receiving copies of regulatory agency comments. Mr. Weissenborn explained that when a "draft" document is issued, regulatory agency representatives provide comments that are incorporated into "draft final" documents. Due to the interest expressed in receiving documents by Ms. Norby, Mr. Crompton, and Mr. Takach, the Navy will provide copies of draft documents to these individuals on a CD-ROM.

The August 15, 2007 meeting was adjourned at 9:07 p.m.

List of Handouts Provided at the Meeting

RAB Meeting Agenda/Public Notice – August 15, 2007 (78th) RAB Meeting.

Meeting minutes from the May 16, 2007 (77th) RAB Meeting.

Presentation: "Supplemental Investigation for IRP Site 6 and Mingled Plumes Area, Former MCAS Tustin, California." August 15, 2007, presented by James Callian, Navy Remedial Project Manager and Tim Heironimus, Bechtel Project Manager.

Former MCAS Tustin Environmental Program Status.

Map – MCAS Tustin Operable Units, Major AOCs, and MTBE Plume - Third Quarter 2006.

Restoration Advisory Board Fact Sheet/Membership Application.

Former MCAS Tustin - Where to Get More Information.

Former MCAS Tustin Marine Corps/Navy Team Contact Information.

Rick Weissenborn, Navy BEC for former MCAS Tustin and former MCAS El Toro, Contact Information.

DTSC Public Participation Specialist Tim Chauvel, Contact Information.

For More Information: Administrative Record and Information Repository Locations.

Internet Access – Environmental Web Sites

Former MCAS Tustin Installation Restoration Program - Mailing List Coupon.

Former MCAS Tustin Installation Restoration Program Advisory Board Mission Statement.

Department of the Navy, "Policy for Conducting Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Statutory Five-Year Reviews," November 2001.

The Under Secretary of Defense, "DoD Policy On Responsibility for Additional Environmental Cleanup after Transfer of Real Property," July 25, 1997.

Department of Defense, "A Guide to Establishing Institutional Controls at Closing Military Installations," February 1998.

Department of Defense, "Institutional Controls: What Are They and How are They Used," Spring 1997.

U.S. EPA, "Checking Up On Superfund Sites: The Five-Year Review," June 2001.

U.S. EPA, "Five-Year Review Process in the Superfund Program," April 2003.

Copies of the meeting minutes and handouts provided at the August 15, 2007 RAB meeting are available at the MCAS Tustin Information Repository located at the University of California, Irvine, Main Library, and 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 final 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.bracpmo.navy.mil

Internet Sites

Navy and Marine Corps Internet Access

BRAC PMO Web Site (includes RAB meeting minutes):

Navy web site: <http://www.bracpmo.navy.mil/>

For Tustin RAB information:

http://www.bracpmo.navy.mil/bracbases/california/tustin/rab_information.aspx

Department of Defense – Environmental Cleanup Home Page Web Site:

<http://www.dtic.mil/envirodod/>

U.S. EPA:

www.epa.gov (this is the homepage)

www.epa.gov/superfund (site for Superfund)

www.epa.gov/ncea (site for National Center for Environmental Assessment)

www.epa.gov/federalregister (site for Federal Register Environmental Documents)

Cal/EPA:

www.calepa.ca.gov (homepage)

www.dtsc.ca.gov (site for Department of Toxic Substances Control)

www.waterboards.ca.gov/santaana (site for Santa Ana Regional Water Quality Control Board)

www.geotracker.waterboards.ca.gov (environmental data for regulated facilities in California)