

FORMER MARINE CORPS AIR STATION EL TORO
RESTORATION ADVISORY BOARD MEETING

November 30, 2005

MEETING MINUTES

The 78th Restoration Advisory Board (RAB) meeting for Marine Corps Air Station (MCAS) El Toro was held Wednesday, November 30, 2005 at Irvine City Hall. The meeting began at 6:40 p.m. These minutes summarize the RAB meeting discussions and presentations.

WELCOME, INTRODUCTIONS, AGENDA REVIEW

Mr. Darren Newton, Base Realignment and Closure (BRAC) Environmental Coordinator (BEC) for MCAS El Toro and Marine Corps RAB Co-Chair, welcomed everyone to the meeting. He asked Ms. Marsha Rudolph, RAB Subcommittee Chair, to lead the Pledge of Allegiance.

Mr. Newton asked for self-introductions of the meeting attendees and welcomed the newest Navy Remedial Project Manager (RPM), Mr. Jim Callian. Mr. Newton reminded RAB members to contact Mr. Bob Woodings, RAB Community Co-Chair, if they are unable to attend meetings. By doing so, RAB members are following established RAB protocol and such absences are then considered an excused absence. He then reviewed the agenda for tonight's meeting. The key presentations this evening will cover: 1) Installation Restoration Program (IRP) Site 1 – Aquifer Test Progress Report; and 2) IRP Site 16 – Summary of the Remedial Design.

Announcements

Mr. Newton read an excerpt from the RAB Mission Statement as a reminder of the RAB's mission:

“The mission of the RAB is to promote community awareness and obtain timely, constructive community review and comment on proposed environmental restoration actions to accelerate the cleanup and property transfer of MCAS El Toro. The RAB serves as a forum for the presentation of comments and recommendations to U.S. Marine Corps, RPMs, the U.S. Environmental Protection Agency (U.S. EPA), and the Department of Toxic Substances Control (DTSC).”

Mr. Newton noted the Information Repository is at the Heritage Park Regional Library. The phone number has recently changed to (949) 936-4040.

Mr. Newton gave a general overview of the 2005 Fiscal Year (FY05) for MCAS El Toro. The Navy received No Further Action (NFA) for 30 Locations of Concern (LOCs) since the completion of the Findings of Suitability to Transfer (FOST) #1. The total acreage of the former station is 4,712 acres. The Navy conveyed 2,795 acres concurrently with a Lease in Furtherance of Conveyance for 921 acres. The Navy completed FOST #2, and removed

critical habitat designation at Site 1. Also, clarifications of the National Priority List (NPL) and non-NPL areas within the station boundaries were made and this involved discussions between U.S. EPA and Lennar, the developer.

The Navy's expenditures for the environmental program and restoration in total has reached \$191.6 million. The fiscal year (FY) 06 budget is \$14.5 million dollars. He said the former base is now transitioning into long-term monitoring and operations and maintenance. The overall cost-to-complete for environmental restoration, which is inclusive of FY06, is \$66.2 million. All remedial actions and long-term monitoring are expected to be completed in FY36.

Mr. Newton said for FY06, the Navy will determine a conveyance strategy for the remaining 75 acres adjacent to Federal Aviation Administration property. For the IRP, the Navy will focus on numerous sites for the final steps of the Remedial Investigation/Feasibility Study (RI/FS) activities and Remedial Actions and work towards Records of Decision (RODs). For environmental compliance aspects, the Navy will continue closure of the remaining areas, including:

- 34 underground storage tanks and 1 aboveground storage tank
- 29 solid waste management units and 2 oil/water separators
- 10 aerial photo anomaly areas and 8 miscellaneous areas

Mr. Newton listed the primary submittal milestones planned for FY06:

Site 1, *Explosive Ordnance Disposal Range*

- o Draft Feasibility Study – April 3, 2006
- o Draft Proposed Plan – September 8, 2006

Site 2 Groundwater, *Magazine Road Landfill*

- o Draft Record of Decision – May 9, 2006

Sites 2 and 17, *Magazine Road and Communication Station Landfills*

- o Draft Operation and Maintenance Plan – June 5, 2006
- o Draft Remedial Action Closeout Report – August 30, 2006

Sites 3 and 5, *Original and Perimeter Road Landfills*

- o Revised Draft Record of Decision – April 14, 2006

Anomaly Area 3

- o Draft Proposed Plan – April 11, 2006
- o Draft Record of Decision – September 20, 2006

Sites 8 and 12, *DRMO Storage Yard and Sludge Drying Beds*

- o Draft Record of Decision – February 27, 2006

Site 16, *Crash Crew Pit No. 2*

- o Draft Operating Properly and Successfully Report – December 30 2005

Site 18, *VOC Regional Groundwater Plume*

- o Draft Operations and Maintenance Plan – September 11, 2006

Site 24, *VOC Source Area - Shallow Groundwater Unit*

- o Draft Operations and Maintenance Plan – September 11, 2006

RAB Vote on 2006 Schedule

Mr. Newton said a vote will be taken to determine if the RAB will switch from a bi-monthly meeting schedule to a quarterly schedule beginning in January 2006. He said the meeting room is reserved for certain dates and the proposed quarterly schedule would be January,

April, July, and October. He noted that an El Toro RAB quarterly schedule would not conflict with the Tustin RAB quarterly schedule that has meetings in February, May, August, and November.

Ms. Rudolph asked if there would be certain RAB meetings that could be combined with public meetings. Mr. Newton replied that RAB and public meetings could be combined if they fell within the same timeframe, and this often results in a better turnout of community members. Mr. Greg Hurley, RAB member, said the RAB is a very valuable tool and after 13 years and 78 RAB meetings, the RAB is the only outlet for community members to have their voices heard on MCAS El Toro issues. For example, he said the BRAC Cleanup Team meetings are closed to the public and having the RAB meetings change to a quarterly schedule could be interpreted as the RAB dying off. Ms. Rudolph said that RAB meetings provide good opportunities to find out what is going on and to discuss any issues that have occurred with MCAS El Toro. Mr. Newton said that the Navy is moving toward the end of the CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act) process and once sites are past the ROD stage, Remedial Design and Remedial Action are implemented and meeting topics could become scarce or redundant. He added that the RAB is not part of the process for redevelopment of the former station. Mr. Hurley said the BRAC program was put in place to give a voice to the community on what the Navy is working on.

Mr. Fred Meier, RAB member, said he prefers bimonthly RAB meetings. Ms. Rudolph said bimonthly meetings are her preference but the July meeting could probably be skipped. Mr. Woodings suggested this topic be tabled for further discussion at the January 2006 RAB meeting. Ms. Rudolph moved to have the RAB continue to meet on a bimonthly schedule. The motion was seconded by Mr. Woodings and Mr. Hurley, and the motion was passed; thus, the RAB agreed to continue with the bimonthly schedule.

Review and Approval of the September 28, 2005 RAB Meeting Minutes

Mr. Woodings asked if anyone had changes to the RAB meeting minutes. No changes were suggested. Mr. Woodings moved to accept the minutes as written and the September 28, 2005 RAB meeting minutes were approved by the RAB.

Navy's Response to the Subcommittee Report from the September 28, 2005 Meeting

Mr. Newton gave responses to the RAB Subcommittee report presented by Ms. Rudolph at the September 28, 2005 RAB meeting.

Mr. Newton acknowledged the RAB Subcommittee's concern with comments from DTSC on the Draft Work Plan for Soil Vapor Extraction Pilot Test at IRP Site 16 and sealing of wells. He said the Navy is only sealing wells that are not part of the pilot test. This will ensure no leakage of air would occur and sealing of such wells will not alter the results of the pilot test.

Mr. Newton said the RAB Subcommittee expressed concern about the possibility of perchlorate contamination migrating off-base. He said that the Navy is responsible for any migration of perchlorate or any other contaminants past the station boundary that are a result of base activities, and the Navy would be responsible if the cleanup of such contamination was needed. He pointed out that the Navy would follow

procedures outlined in the Base Reuse Implementation Manual. Mr. Newton pointed out the “Responsibility for Additional Environmental Cleanup after Transfer of Real Property” Navy Policy was available on the information table at the meeting.

Mr. Newton said the construction materials for landfill caps at Sites 2 and 17 and construction schedules have been established. He said the Navy has reviewed the remedial action and work plan documents. The proposed truck route has been coordinated with the City of Lake Forest and the Sheriff’s Department. The landfill cap at Site 2 is scheduled to be constructed in spring 2006 and, if construction activities extend past the California gnatcatcher season, there will be a certified biologist on-site to observe all activities. If any breeding gnatcatcher pairs are found, the Navy will safely move the nest or install sound barriers as protection around the specific nesting areas. Mufflers to dampen sound will be installed on heavy equipment used for construction purposes.

Mr. Newton addressed a concern shared by the RAB Subcommittee and the community regarding projects being done right versus being done fast whereas the Navy is not pressured by reuse and developer timelines. He said the Navy spends a lot of time preparing remedial designs and work plans for each site. All documentation undergoes an extensive quality assurance review process each step of the way. The Navy wants to make sure the projects are done right the first time.

Mr. Newton said the Navy will officially say goodbye to Mr. Andy Piszkin, Former BEC for MCAS El Toro, and he will be recognized for his efforts. A letter can be formulated thanking him for his leadership and collaboration with community members, and will be coordinated at the appropriate time.

RAB Subcommittee Meeting Report, Ms. Marcia Rudolph, RAB Subcommittee Chair

Ms. Rudolph said the RAB Subcommittee meeting was held from 5 to 6 p.m. tonight in Room L-104 at Irvine City Hall before the RAB meeting. She thanked the regulators from U.S. EPA and DTSC for participating.

Topics and concerns discussed at the RAB Subcommittee meeting are listed below:

Ms. Rudolph said there was concern with a letter from U.S. EPA that addressed lead levels associated with Building 296.

Concern was noted regarding the letter from Mr. Frank Cheng, DTSC Project Manager, in which he brought up the issue of IRP Site 16 easements to ensure that regulators will have access to check on certain areas upgradient and downgradient of the site.

Regarding the Final Design Submittal for Sites 2 and 17, concern was expressed about the table at the end of the report regarding four rounds of post-closure monitoring. Clarification and details are needed on the four rounds of sampling, and it needs to be clear if this involved sampling for radionuclides and salts.

She said there was a reference to a well TIC55, which she was under the impression had been transferred to the Orange Country Water District or was a closed well. She said she was unsure as to why it was included in the report.

She expressed concern with Site 2 groundwater and the potential for perchlorate to migrate past the station boundary, liability for such migration, and how the Navy would handle it.

Update on the Irvine Desalter Project

Mr. Steve Malloy, Irvine Ranch Water District (IRWD), provided an update on the Irvine Desalter Project (IDP), which covers two water systems – the non-potable system and the potable system. The non-potable system meets CERCLA requirements for cleanup of the plume of groundwater contaminated with volatile organic compounds (VOCs) that originates on-station. Treated water will be used by IRWD in its reclaimed water system for watering of golf courses or green belts. The potable system will extract groundwater from areas outside of the plume. This water will be treated for nitrates and salts and be used by IRWD for domestic purposes. Mr. Malloy's presentation discussed treatment systems, various extraction wells and pipelines, and included a photo/slide show.

Mr. Malloy said construction of the potable treatment plant is approximately 25-percent complete. The potable well pumps are located at Culver Drive and I-5 and are about 15-percent complete. At this time, IRWD is in the process of acquiring other wells that would supply additional water for the potable system.

Construction of the Navy's Shallow Groundwater Unit treatment plant (a CERCLA component), located just outside the former station fence line, is approximately 10-percent complete. Completion of the plant is scheduled for April 2006. The system will be able to treat VOC-contaminated water (trichloroethene [TCE] is the primary contaminant) so concentrations of contaminants will be non-detectable. Treatment includes use of low-profile air stripping units and off-gas treatment. Treated water will be reinjected into the aquifer or disposed of into the ocean.

Construction of the Principal Aquifer treatment plant (a CERCLA component) is underway and is scheduled to be completed in June 2006. Treatment will be done in the same manner as water extracted from the shallow groundwater unit. Treated water will be pumped into IRWD's non-potable water distribution system.

Wells used for the CERCLA component are wells ET-1, ET-2 and IRWD 78. Well ET-1 reaches into the principal aquifer to a depth of 1,000 below the ground surface. Well ET-1 is being rehabilitated and a new pump is being installed. Pump tests are being conducted and extracted water is treated with an air stripper. Groundwater contains 20 parts per billion (ppb) of TCE; however, concentrations will be non-detectable, after treatment. Well ET-2 also has a depth of 1,000 feet and the pump motor is located under a sidewalk. IRWD was able to put a camera down this well to ensure it can be used for the project. In order to protect the well from corrosion, IRWD installed a stainless steel liner within the well. It will be cleaned using a sonar jet cleaning system to rid the well of any bacteria and electronically charged before the water is pumped out. IRWD well 78 is located under the greenbelt and is being rehabilitated. IRWD used an air-burst cleaning system to jar the bacteria off of the inside of the well.

Potable system wells consist of IRWD well 76, well IRWD 77, and well TIC107. IRWD well 76 is upgradient from the TCE plume and contains approximately 1,000 parts per million (ppm) of salts. After undergoing treatment, these concentrations will be reduced to 300 ppm. As a comparison, ocean water has about 35,000 ppm of salts. Well IRWD 77, located at Irvine High School, has a pump base and piping that is hidden behind the baseball field and blends in with its surroundings.

IRWD wanted to install Well TIC107 before condominiums were to be built in that area and installation was completed a couple of months ago. This well is also 1,000 feet deep and the pump is located within the well at a depth of 300 feet. Water extracted from this well will hook into IRWD's raw water system for reverse osmosis treatment and eventual use as potable water.

Mr. Malloy also discussed the non-CERCLA component pipelines. These are being installed in two phases. The South Irvine Brine Line from east of Bake Parkway will be constructed January through April 2006. The South Irvine Brine Line located west of Bake Parkway will be completed in June 2006. This phase also includes the remainder of all potable water pipelines. He said that IRWD sent a camera through the old irrigation system line along Culver Drive to observe current conditions of existing pipelines and to avoid obstructing traffic. The old line is approximately 18 inches wide and a 12-inch wide slip line will be placed inside the old line. This work will be conducted after the holiday season.

Construction of the potable treatment plant is about 25-percent complete. The pad for the reverse osmosis treatment system has been poured and tilt-up walls are being installed to screen the facility from the street. By July 2006, IRWD plans to be in full operation with the treatment plant. Mr. Malloy said that the IDP will provide potable water for 40,000 people.

Mr. Malloy said the Final Explanation of Significant Differences is anticipated for a December 2005 submittal to the Navy and the regulatory agencies. This document is a follow-up document to the ROD and explains the technical modifications made to the remedial design for groundwater cleanup. These modifications are consistent with the cleanup goals stated in the ROD.

NEW BUSINESS

Regulatory Agency Comment Update

Mr. Richard Muza, Project Manager, U.S. Environmental Protection Agency Region IX

Mr. Muza said the U.S. EPA has reviewed a number of documents since the last RAB meeting. U.S. EPA concurred with Revised Draft Final Design Submittal for Remedial Action at Sites 2 and 17. A few comments were provided for added clarification to improve the quality of the final design submittal and to enhance the figures in the document.

Mr. Muza provided comments on the Draft ROD for Site 24 VOC Source Area Vadose Zone, but U.S. EPA concurs with the interim remedy as being effective and no further action is necessary. Mr. Muza said he submitted minor comments regarding determination of cleanup levels and clarification of the re-evaluation of threshold concentrations.

Mr. Muza reviewed the Summary Report for Potential Release Listings (PRLs) Group III. In the attachment that addressed Building 297, a lead concentration in soil of around 200 to 215 milligrams per kilo gram (mg/kg) was reported. The screening number that was being used as the preliminary remediation goal for lead is 150 mg/kg, and the agency felt this is significant enough that it should be looked at further to confirm that a significant release has not occurred. It is an order of magnitude above the El Toro background concentration of 15.1 mg/kg for lead in soil.

Mr. Muza said the Draft Remedial Action Report for Site 11 was thorough and he provided a few minor comments recommending clarification on results. He added that the agency is thrilled that the excavation has been completed. Mr. Muza said the Navy recently requested an extension request for IRP Site 2 groundwater and IRP Sites 3 and 5 landfill projects, but U.S. EPA denied the extension and is working out these issues with the Navy.

Mr. Muza said U.S. EPA was approached by attorneys from Heritage Fields regarding the NPL site designation and what sites are included in this designation. He added that there are areas of former MCAS El Toro that were never intended to be part of the NPL area. Heritage Fields asked U.S. EPA about "partial deletion." The opinion of U.S. EPA regarding partial deletion is that all areas under the Findings of Suitability to Lease still have contaminated areas because of the carve outs. These areas need to be addressed and completed, thus a partial deletion cannot be done at this time. Until more areas are covered in a FOST, then partial deletion may be considered.

Mr. Don Zweifel, RAB member, asked when capping at Sites 2 and 17 will commence. Mr. Gordon Brown, Navy RPM, said that capping at Site 2 is schedule to be conducted in spring 2006. Site 17 is scheduled to begin in fall 2006 and be completed during FY07.

Mr. Frank Cheng, Remedial Project Manager, Cal/EPA Department of Toxic Substances Control (DTSC)

Mr. Cheng said DTSC concurred with Revised Draft Final Design Submittal for Remedial Action at Sites 2 and 17. He provided comments on the Draft ROD for Site 24 VOC Source Area Vadose Zone and DTSC had minor comments. He asked that the Navy describe in the ROD how institutional controls for Site 24 groundwater are now being implemented.

Mr. Cheng said he reviewed and approved Closure Reports for Temporary Accumulation Areas (TAA) 769 and 800. Based on the Navy's response to DTSC request for conducting confirmation sampling, DTSC concurred with the Navy's no further action recommendation. Both sites should be identified as "closed" and are suitable for residential uses. TAA 769 consists of a 12- by 17-foot concrete pad with a roof and berm, enclosed by a chain-link fence, and was used as a temporary area for storing hazardous wastes. TAA 800 was a former hazardous waste storage area consisting of a 10- by 20-foot concrete pad surrounded by a concrete berm and covered with an aluminum roof.

DTSC also reviewed Group II PRL Summary Report for five PRLs. The agency concurred with the report's recommendation of no further investigations of these PRLs.

Installation Restoration Program Site 1 Explosives Ordnance Range – Aquifer Test Update, Gordon Brown, Navy Remedial Project Manager

Mr. Brown said the Navy has been working to address perchlorate associated with Site 1. He said that tonight's presentation would not contain a lot of background information. He added that the data obtained will proceed through the peer review process before it is presented to the RAB. He introduced Mr. Dan Herlihy of ECS to give an update on the recent aquifer test at IRP Site 1. (ECS is the Navy's contractor conducting aquifer tests at IRP Sites 1 and 2.)

Mr. Herlihy said the final aquifer characterization work plan was completed in April 2005. The objective is to review the existing geologic information and to collect additional subsurface information at the site. This information will provide a framework for understanding the movement of groundwater through the source area of perchlorate contamination. The purpose for conducting aquifer tests is to refine the conceptual site model, to quantify aquifer parameters, and to provide information necessary for developing potential remedies for addressing perchlorate contamination.

Mr. Herlihy said most of the detailed study of surface geology and hydrogeology and collection of subsurface data had been conducted as of June 2005. Aquifer test phases 1 and 2 (to quantify aquifer parameters) have also been completed. Results are used to refine the understanding of perchlorate distribution in the subsurface, to determine the modes of migration for perchlorate, and to better understand how groundwater quality changes as groundwater elevations fluctuate up and down. The perchlorate zones have been separated into two separate zones. Long-term aquifer testing has been implemented to evaluate potential remedies for addressing perchlorate contamination.

In October 2005, the Navy approved a field change justification for ECS to further assess perchlorate migration in the groundwater from perchlorate zones 1 and 2. Mr. Herlihy explained that the two zones are "hot spots" with high concentrations of perchlorate, but the zones have different hydrogeological characteristics. This investigation effort would also assess potential capture and extraction of perchlorate and quantify aquifer characteristics. ECS would also establish the depth of competent bedrock at the zone 1 boundary, which is focused on the center of the valley. There appears to be a buried, narrow and v-shaped valley where perchlorate escapes. A series of direct-push borings and collection of groundwater samples to the left of zone 1 were conducted and the probe was pushed downward until it reached 47 feet below the surface. It is believed that perchlorate moves through the alluvium layer of the v-shaped valley. Monitoring wells were placed in the center of the zone. Sampling results are not yet available. Mr. Herlihy noted that the bedrock where the direct-push samples were collected is a sand-siltstone mixture.

Mr. Herlihy noted that in June 2005 the first two aquifer tests conducted determined the radius of influence which is approximately 400 feet by 150 feet. The new aquifer test involved conducting one-day step-tests to select a constant discharge rate. The new tests also involve pumping wells in this area on a 10-day cycle to establish where perchlorate leaves the zones. He said a Constant Rate Aquifer Test at well 01-EW-04 will be conducted for 60 days. This involves performing groundwater sampling to confirm water levels and perchlorate concentrations. Overall, data obtained from this test will be evaluated to determine if they coincide with ECS' hunch about where perchlorate is migrating from zones 1 and 2.

As the water is pumped out of the ground, it will also be treated and discharged through piping that is 1,000 feet away from the extraction area. This will prevent recharge of the wells with extraction water. He said the rate of pumping ranges from 0.1 to 1.0 gallon per minute.

After 60 days of testing, ECS will reevaluate data with respect to the established Data Quality Objectives. The Navy may decide to continue to test for a longer duration. This could involve using additional extraction wells, optimizing extraction rates and the capture zone,

controlling flow out of the zone, and monitoring perchlorate distribution. The Draft Test Aquifer Report is scheduled to be completed and submitted to the regulatory agencies by April 2006.

Discussion

Mr. Zweifel asked about the capture ratio. Mr. Herlihy said ECS has plenty of wells installed and will pump at a controlled rate.

Mr. Peter Hersh, RAB member, asked if there is any new perchlorate being added to the site and if there is something buried out there that would contribute to this. Mr. Herlihy said that perchlorate present is from the explosions and detonations that occurred during active use of the Explosives Ordnance Disposal range. Perchlorate washes down fast and soil sampling and analysis has determined there are no new sources of perchlorate. Rain has washed perchlorate to the groundwater table. Mr. Hersh asked if it is possible to have undiscovered areas of perchlorate. Mr. Herlihy said if there are any hidden pockets of perchlorate, ECS can capture it on its way out of the zones, based on the geologic information of the site. He added that data evaluated thus far indicate where perchlorate is concentrated, and areas where it exits have been preliminarily identified. At this point, it appears that perchlorate is moving through a narrow, Paleozoic channel, and if the newest test data confirms this to be true, this is the location where perchlorate should be captured.

Ms. Content Arnold, Lead Navy RPM, noted that the IRP Site 1 Draft RI is undergoing peer review. The RI Report will eventually include all of the data collected from the aquifer testing.

Installation Restoration Program Site 16 Crash Crew Training Pit No. 2, Marc P, Smits, Navy RPM

Mr. Smits said IRP Site 16 is located in the middle of the runways at the former station and was used in the 1970s and early 1980s for firefighting training. This pit was unlined and waste solvents and oils were placed into it and set on fire for firefighters to extinguish.

The source of contamination is the main pit at IRP Site 16. The latest data show that highest concentrations of TCE, the primary contaminant at the site, range from 100 to 200 ppb in the groundwater below the main pit area. At a distance of 300 feet downgradient of the site, sampling results have determined that concentrations of TCE are non-detectable. The diameter of the site's pit area surface area is about 100 feet and TCE has migrated downward 160 feet from the surface into the groundwater table.

Mr. Smits said the Final ROD was signed in July 2003 and monitored natural attenuation (MNA) with institutional controls was selected as the cleanup remedy for the site. Nine additional wells were installed in fall 2004 for monitoring and to support the pre-design investigation. The pre-design investigation focused on obtaining data on natural attenuation parameters and was conducted from October 2004 to March 2005. A technical memorandum for the pre-design investigation was issued in May 2005. The Draft Remedial Design for MNA with Institutional Controls was submitted to regulatory agencies in July 2005.

The remedial design establishes the operational guidance for implementation of the final remedy as prescribed in the ROD through site closeout. The remedial design contains four

key components: the long-term monitoring plan, the inspection and maintenance plan, a contingency remedy, and the land-use control remedial design. It also describes the procedures to evaluate when cleanup standards have been met and presents new data collected to evaluate MNA parameters. The long-term monitoring plan presents the frequency and location of the samplings for groundwater and soil gas. The inspection and maintenance plan presents the frequency, implementation, and reporting for engineering controls. The contingency remedy is what will be implemented if the remedial action objectives are not being met by the final remedy. Finally, the land-use control remedial design presents the information on implementation, maintenance, and reporting for institutional controls. It prevents wells from being placed next to the contaminant plume which could have an impact on the groundwater.

The Navy is completing the Final Remedial Design and is getting ready to implement the final remedy. At IRP Site 16, remedial actions for both the CERCLA Program and the Petroleum Corrective Action Program are being implemented. The CERCLA Program is addressing VOCs, primarily TCE, associated with the groundwater. Under the Petroleum Corrective Action Program, the Navy is using soil vapor extraction technology at this site to address total petroleum hydrocarbons (TPH) in the soil consisting of residual products that remain from the burning conducted in the pits. TPH has not migrated into the groundwater it may have hit a clay layer.

Mr. Smits said the three remedial action objectives for IRP Site 16 are to:

1. Monitor concentrations of VOCs in soil vapor in the vadose zone at IRP Site 16 to confirm concentrations are not increasing over time.
2. Maintain consistency with U.S. EPA, California State Water Resources Control Board, and Santa Ana Regional Water Quality Control Board policies and regulations. Restore potential beneficial uses of the shallow aquifer underlying IRP Site 16 to the extent practicable, while preventing or minimizing VOC migration beyond current boundaries at concentrations exceeding site cleanup goals.
3. Protect human health by preventing use of VOC-contaminated shallow groundwater until the site cleanup goals are achieved.

Mr. Smits said the Navy will develop a long-term monitoring plan to be consistent with the U.S. EPA's guidance document titled, *Performance Monitoring of MNA Remedies for VOCs in Groundwater*, dated April 2004. Groundwater samples will be collected from the nine monitoring wells on a semi-annual basis. These wells are located along the centerline of the flow path and the leading edge of the TCE plume. Sampling and analysis will determine if concentrations are increasing. The soil gas sampling will be continued following the frequency defined and well locations that were identified in the ROD and Pre-Design Work Plan.

Based on comprehensive data evaluation, the dominant attenuation mechanism appears to be a physical process (dispersion, adsorption, and volatilization). Rapid attenuation of the TCE concentrations downgradient of the main pit and decreases in concentrations within the main pit indicate prevailing processes are indeed physical. The results of chemical and or biological indicators and TCE daughter products do not indicate chemical or biological attenuation processes are occurring. New groundwater modeling and other data evaluation tools will be useful in evaluating the site over time.

Mr. Smits presented data tables that showed concentration levels over time. A steady pattern of downward concentrations over time has been documented. Mr. Smits said that TCE concentrations are almost non-detectable at points approximately 300 feet away from the main pit. He added that this is a significant finding and these are order-of-magnitude changes.

The Land Use Control Remedial Design was developed based on the joint Navy/U.S.EPA document, “*Principles and Procedures for Specifying, Monitoring, and Environment of Land Use Controls and other Post-ROD Actions*” as contained in the Navy letter dated April 2, 2003. The Land Use Control Remedial Design comes into play when property is transferred and new deeds are granted for the new property owners. It contains the following components:

- Description of the site
- Area requiring institutional controls
- Land use control performance objectives
- Land use restrictions
- Department of the Navy and future landowner responsibilities with respect to land use restriction inspections, reporting, and enforcement.

Mr. Smits said that the Operating Properly and Successfully (OPS) documentation provides supporting information to demonstrate the selected remedy is performing as it was intended to do. The groundwater and soil data collected since the signing of the ROD will be utilized to demonstrate the remedy is protective of human health and the environment, enforceable, based on reliable technology, and operating within a site that has been adequately characterized. Once the site has been designated as OPS by U.S. EPA and the other regulatory agencies, a FOST can be developed for property transfer.

Mr. Smits presented the schedule for implanting the IRP Site 16 Remedial Design and the OPS component for this project:

- Draft Final Remedial Design – December 28, 2005
- Draft OPS Report – December 30, 2005
- Final Remedial Design – January 28, 2006
- Spring 2006 Sampling Round – March 2006
- Draft Final OPS Report – May 2, 2006
- Final OPS Report – June 8, 2006
- Fall 2006 Sampling Round – September 2006

Open Q & A -- Environmental Topics

Mr. Newton asked if there were any other environmental questions. No questions were raised by RAB members.

MEETING EVALUATION AND FUTURE TOPICS

Suggestions for future presentation topics include:

- RAB Community Co-Chair elections
- Update on the Irvine Desalter Project
- Group III PRLs – lead contamination

Mr. Newton said he will work with Mr. Woodings on future topics for the next RAB meeting.

Action item:

Mr. Newton will provide responses to the RAB Subcommittee meeting report concerns at the next RAB meeting.

Upcoming RAB Meeting and Subcommittee Meeting

The next RAB meeting will be held from 6:30 to 9 p.m., Wednesday, January 25, 2006, at Irvine City Hall, One Civic Center Plaza, Irvine in the Conference and Training Center (CTC).

Recent RAB Subcommittee Meetings

The most recent RAB Subcommittee meeting was held November 30, 2005, in Room L-104, Irvine City Hall, before tonight’s RAB meeting.

RAB Meeting Adjournment – November 30, 2005 Meeting

The 78th meeting of the MCAS El Toro Restoration Advisory Board was adjourned at 9:22 p.m.

11/30/05 RAB Meeting Attendance:

<u>TOTAL PEOPLE IN ATTENDANCE</u>	<u>TOTAL PEOPLE ON SIGN-IN SHEET</u>	<u>TOTAL RAB MEMBERS PRESENT</u>	<u>TOTAL RAB AGENCY MEMBERS PRESENT</u>	<u>TOTAL RAB COMMUNITY MEMBERS PRESENT</u>	<u>TOTAL EXCUSED ABSENCES RAB MEMBERS</u>	<u>EXCUSED ABSENCES – AGENCY RAB/ COMMUNITY RAB</u>
27	21	12	6	6	1	1/0

RAB and Subcommittee Meeting and Public Meeting Dates (January 2006-July 2006)

RAB Members - The list below indicates which dates are currently reserved for RAB and RAB Subcommittee meetings at Irvine City Hall, Conference and Training Center, Room L-102, and Room L-104, respectively. Please note that dates on this list may also serve as combined RAB/public meetings or either stand-alone RAB or public meetings. (FYI, the MCAS Tustin RAB is on a quarterly schedule and meeting will be held February, May, August, and November 2006.)

RAB and Subcommittee Meeting Dates (meeting space confirmed)	RAB Meeting Conference and Training Center (CTC) or Room L-102 6:30 – 9:00 p.m.	Subcommittee Meeting Room L-104 5:00 – 6:00 p.m.
Wed – January 25, 2006	CTC	Room L-104
Wed – March 8, 2006*	Room L-102	Room L-104
Wed – March 29, 2006**	Room L-102	Room L-104
Wed – April 26, 2006*	CTC	Room L-104
Wed – May 31, 2006	CTC	Room L-104
Wed – July 26, 2006	CTC	Room L-104

* possible public meeting date to present Proposed Plan

**possible public meeting date to present Proposed Plan; could serve as combined RAB/public meeting.

Materials/Handouts Include:

- *RAB Meeting Agenda/Public Notice – 11/30/05 RAB Meeting – 78th Meeting.
- *Meeting Minutes from the September 28, 2005 RAB Meeting – 77th Meeting.
- MCAS El Toro RAB Meeting Schedule January 2006 – July 2006.
- Internet Access – Environmental Web Sites.
- MCAS El Toro RAB Mission Statement and Operating Procedures.
- MCAS El Toro – Navy Team contact information.
- MCAS El Toro – RAB Member Roster.
- MCAS El Toro Installation Restoration Program – Mailing List Coupon.
- MCAS El Toro – BRAC Cleanup Team Members and Key Project Representatives and Administrative Record File and Information Repository Locations and Contacts.
- RAB Membership Application – MCAS El Toro RAB.
- Environmental Data Quality Article, September 2003.
- One-Page Glossary of Technical Terms.
- Fact Sheet: Site 24 Groundwater Cleanup, June 2005.
- Map – Installation Restoration Program Site Locations.
- Department of Navy – Responsibility for Additional Environmental cleanup after Transfer of Real Property, July 1997.
- Department of Navy – Policy for Optimizing Remedial and Removal Actions Under the Environmental Restoration Programs, April 2004.
- Department of Defense – A Guide to Establishing Institutional Controls at Closing Military Installations, February 1998.
- Department of Defense – Institutional Controls, Spring 1997.
- U.S. EPA Fact Sheet – A Citizen’s Guide to Natural Attenuation, October 1996.
- *Presentation* – MCAS El Toro Environmental Overview.
- *Presentation* – Summary of the Remedial Design for IRP Site 16.
- *Presentation* – IRP Site 1, Aquifer Test Progress Report.

* Mailed to all RAB meeting mailer recipients on 11/23/05.

Agency Comments and Letters - U.S. Environmental Protection Agency (U.S. EPA)

- U.S. Environmental Protection Agency (U.S. EPA) – Revised Draft Final Design Submittal, Remedial Action, Operable Unit 2B, IRP Sites 2 and 17, Former Marine Corps Air Station El Toro – To: Mr. Darren Newton, BEC, MCAS El Toro; From: Rich Muza, Remedial Project Manager, U.S. EPA (letter dated October 20, 2005).
- U.S. EPA – Draft Record of Decision, Operable Unit 2A, IRP Site 24 – VOC Source Area Vadose Zone, Former Marine Corps Air Station El Toro – To: Darren Newton, BEC, MCAS El Toro; From: Rich Muza, Remedial Project Manager, U.S. EPA (letter dated October 24, 2005).
- U.S. EPA – Summary Report for Group 3 PRLs, Environmental Baseline Survey, Former Marine Corps Air Station El Toro – To: Darren Newton, BEC, MCAS El Toro; From: Rich Muza, Remedial Project Manager, U.S. EPA (letter dated November 3, 2005).
- U.S. EPA – Comments on the Draft Remedial Action Report, IRP Site 11, Former Explosive Ordnance Disposal (EOD) Range, Former Marine Corps Air Station El Toro – To: Darren Newton, BEC, MCAS El Toro; From: Rich Muza, Remedial Project Manager, U.S. EPA (letter dated November 14, 2005).

Agency Comments and Letters – California Environmental Protection Agency (Cal-EPA)

- Cal-EPA, Department of Toxic Substances Control (DTSC) Draft Record of Decision, Operable unit 2A, , IRP Site 24 – VOC Source Area Vadose Zone, Former MCAS El Toro– To: Mr. Darren Newton, BEC, MCAS El Toro; From: Frank Cheng, Remedial Project Manager, DTSC. (letter dated October 31, 2005)
- Cal-EPA, DTSC – Revised Draft Final Design Submittal for Operable Unit 2B, Landfill Sites 2 and 17, Former MCAS El Toro– To: Mr. Darren Newton, BEC, MCAS El Toro; From: Manny Alonzo, Office of Military Facilities, DTSC. (letter dated November 1, 2005)

- Cal-EPA, DTSC – Final Summary Report for Group II Potential Release Locations, Environmental Baseline Survey, Former MCAS El Toro– To: Mr. Darren Newton, BEC, MCAS El Toro; From Manny Alonzo, Office of Military Facilities, DTSC. (letter dated November 2, 2005)
- Cal-EPA, DTSC – Approval of the Closure Report for Temporary Accumulation Area 769, Former MCAS El Toro– To: Mr. Darren Newton, BEC, MCAS El Toro; From: Manny Alonzo, Office of Military Facilities, DTSC. (letter dated November 8, 2005)
- Cal-EPA, DTSC – Approval on the Closure Report for Temporary Accumulation Area 800, Former MCAS El Toro– To: Mr. Darren Newton, BEC, MCAS El Toro; From: Manny Alonzo, Office of Military Facilities, DTSC. (letter dated November 21, 2005)

California Regional Water Quality Control Board (RWQCB), Santa Ana Region

- No Items Submitted

Additional Information Submitted – 11/30/05 RAB Meeting

- Irvine Ranch Water District, Irvine Desalter Project Update Letter and Map, November 30, 2005.

Copies of all past RAB meeting minutes and handouts are available at the MCAS El Toro Information Repository, located at the Heritage Park Regional Library in Irvine. The address is 14361 Yale Avenue, Irvine; the telephone number is (949) 936-4040 (NEW PHONE NUMBER). Library hours are Monday through Thursday, 10 am to 9 p.m.; Friday and Saturday, 10 am to 5 p.m.; Sunday 12 p.m. to 5 p.m.

Internet Sites

Navy and Marine Corps Internet Access

BRAC PMO Web Site (includes RAB meeting minutes):

Primary Navy web site: <http://www.navybracpmo.org>

Secondary Navy web site: <http://www.efdswnavfac.navy.mil/environmental/EIToro.htm>

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)

www.epa.gov/fedrgstr/EPA-IMPACT/2004/April/Day-27/i9203.htm (site for Endangered and Threatened Wildlife and Plants; Proposed Designation of Critical Habitat for the Riverside fairy shrimp)

Cal/EPA:

www.calepa.ca.gov (this is the homepage)

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

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