

Marine Corps Air Station El Toro Installation Restoration Program

Public Information Materials

1/28/98

Restoration Advisory Board Meeting held at Irvine City Hall Irvine, CA

Materials/Handouts Include:

- RAB meeting agenda/Public notice - 1/28/98 RAB meeting.
- RAB Final Meeting Minutes - 12/3/97 RAB meeting (*Minutes amended and approved at the 1/28/98 meeting.*)
- Sign-in sheets - 1/28/98 RAB meeting
- Presentation - "Update on the MCAS El Toro Federal Facilities Agreement Schedule" by Andy Piszkin, Lead Remedial Project Manager, Southwest Division Naval Facilities Engineering Command.
- Presentation - "Dept. of Navy/MCAS El Toro Response to Regulatory Agency Comments on the Draft Proposed Plan for Station Landfills (Sites 3 and 5)" by Bernie Lindsey, Remedial Project Manager, Southwest Division Naval Facilities Engineering Command.
- Handout, "MCAS El Toro Alternatives Evaluated" (excerpt from MCAS El Toro RAB Meeting Minutes, 12/3/97 RAB Meeting, page 8).
- Handout - "MCAS El Toro Location Map - Inactive Landfills
- Handout - "Where to Get More Information"
- Handout - "Navy and Marine Corps - Internet Access, Environmental Web Sites
- Handout - "MCAS El Toro Mailing List Coupon"

- Agency Comments - Cal-EPA, Department of Toxic Substances Control
 - Cal-EPA DTSC Comments on Draft Soil Vapor Extraction Pilot Test Summary Report, Site 24, VOC Source Area, MCAS El Toro (letter January 13, 1998).
 - Cal-EPA DTSC Comments on Draft Base Realignment and Closure (BRAC) Cleanup Plan, MCAS El Toro (letter dated January 26, 1998).

**MCAS El Toro
Restoration Advisory Board
Meeting**

**28 January 1998 6:30-9:00 PM
Irvine City Hall
Conference and Training Center
One Civic Center Plaza
Irvine**

AGENDA

Welcome/Introductions/Agenda Review (6:30-6:40)

Joseph Joyce
Marine Corps/Navy RAB Co-chair

Old Business (6:40-6:55)

Approval of 12/3/97 Minutes (6:40-6:45)

Greg Hurley
RAB Community Co-chair

Announcements (6:45-6:55)

Joseph Joyce & Greg Hurley

New Business (6:55-8:30)

Regulatory Agency Comment Update (6:55-7:15)

Glenn Kistner
U.S. Environmental Protection
Agency

Tayseer Mahmoud
Cal-EPA, Dept. of Toxic
Substances Control

Debrief on Community Co-Chair Meeting with Cal-EPA
Dept. of Toxic Substances Control (7:15-7:30)

Greg Hurley

Update on the Federal Facilities Agreement Schedule
(7:30-7:45)

Andy Piszkin
U.S. Navy/Southwest Division

BREAK (7:45-7:55)

Dept. of Navy's Response to Regulatory Agency Comments
on the Draft Proposed Plan for Station Landfills (7:55-8:30)

Andy Piszkin or Bernie Lindsey
U.S. Navy/Southwest Division

Meeting Summary (8:30-8:50)

Meeting Evaluation

Future Topics and Meetings

Greg Hurley

Closing (8:50-9:00)

Joseph Joyce & Greg Hurley

PUBLIC NOTICE

***MARINE CORPS AIR STATION
EL TORO***

Restoration Advisory Board Meeting



***Participate in the environmental restoration and cleanup
program underway at MCAS El Toro.
Your input is welcome!***

**Wednesday, January 28, 1998
6:30 - 9:00 p.m.**

**Irvine City Hall
Conference and Training Center
One Civic Center Plaza, Irvine**

This meeting will feature the following activities and presentations:

- ***Department of Navy's Response to Regulatory Agency Comments on the Draft Proposed Plan for Station Landfills***
- ***Update on Environmental Program Schedules***



For more information about this meeting and the Installation Restoration Program at MCAS El Toro, please contact:

Commanding General
AC/S, Environment (1AU)
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(714) 726-3470 or 726-3386

MARINE CORPS AIR STATION EL TORO
RESTORATION ADVISORY BOARD MEETING

December 3, 1997

FINAL MEETING MINUTES

A Restoration Advisory Board (RAB) meeting for Marine Corps Air Station (MCAS) El Toro was held Wednesday, December 3, 1997 at the Irvine City Hall. The meeting began at 6:30 p.m. These minutes summarize the discussions and presentations from the meeting.

WELCOME, INTRODUCTIONS, AGENDA REVIEW

Mr. Joseph Joyce, Marine Corps RAB Co-Chair, opened the meeting by introducing himself and welcoming everyone in attendance. He reminded the group to sign in and include their name and address on the sign-in sheet, so all in attendance will receive a copy of the meeting minutes and the next RAB meeting agenda. Following self-introductions made by all in attendance, Mr. Joyce provided an overview of the meeting agenda. One amendment was made to the agenda concerning the topic, "MCAS El Toro Landfills, Sites 2, 3, 5 and 17 – Institutional Controls", the original presenter, Andy Piszkin, Lead Remedial Project Manager, Southwest Division Naval Facilities Engineering Command (SWDIV) was replaced by Dr. Dante Tedaldi, Project Manager, CLEAN II Program (Bechtel Corporation).

OLD BUSINESS

Review and Approval of September 24, 1997 Meeting Minutes

The RAB minutes were approved without amendment.

Two Records of Decision Signed by Base Closure and Realignment (BRAC) Cleanup Team

Mr. Joyce made the announcement that two Record of Decisions (RODs) were signed by MCAS El Toro, the U.S. Environmental Protection Agency (U.S. EPA), and the State of California's Department of Toxic Substances Control (DTSC) and Regional Water Quality Control Board (RWQCB). The ROD for Site 24, Volatile Organic Compound (VOC) Source Area, Soil Vapor Extraction in the Vadose Zone, and the ROD for eleven No Action sites were signed in September.

RAB Community Questionnaire/Survey Results- Greg Hurley, RAB Community Co-Chair

At the September 24, 1997 RAB meeting, Mr. Hurley circulated a "Community Questionnaire" requesting input from RAB members on what the RAB can collectively do to better assist or facilitate communication with the respective constituency each RAB member represents, the general community, or other interested parties. In follow-up, Mr. Hurley stated that he received a number of suggestions from RAB members which were very helpful

and hopes to accommodate most of the requests. He also said that he was impressed with the number of people RAB members are reaching out to in the community. He noted that Mr. Joyce had the questionnaire responses, and welcomed the RAB members to look over them at their leisure.

RAB Installation Restoration Sites Tour – Marcia Rudolph and Joe Barney, RAB Members

On Saturday, October 25, 1997 at 9:00 a.m., a tour of the Installation Restoration Program Sites was conducted by Joseph Joyce and SWDIV Remedial Project Managers Andy Pizskin and Bernie Lindsey. A total of fifteen people participated in the tour. Areas of the Station covered on the tour consisted of:

- the remediation activities at Tank Farm 2 and Tank 398 (where jet fuel is being removed and recovered from underground areas of contaminated soil and water);
- Sites 2 and 17, two of the Station's inactive landfills, where removal actions were recently completed to cleanup debris and reduce erosion;
- Volatile Organic Compound (VOC) Source Area (Site 24) where pilot studies are being conducted for groundwater treatment and soil vapor extraction to remove industrial solvents from below the ground surface;
- a bioremediation cell where contaminated soil is being treated; and
- clean-closed Tank Farm Sites 1, 3, 4 and 5.

Mr. Barney and Ms. Rudolph presented an overview of the tour and further described the above mentioned activities. Both agreed that taking the tour was a worthwhile experience which broadened their perspectives regarding what is being done with the cleanup effort. Ms. Rudolph said that it provided a point of reference for the Stations's military presence and history, the winding down of Marine Corps military operations, and the ongoing environmental cleanup effort. Mr. Barney noted that the various military activities were very sensitive to the environmental issues at the Station. Both encouraged other RAB members to take the tour the next time it is scheduled.

NEW BUSINESS

Regulatory Agency Comment Update - Glenn Kistner, Project Manager, U.S. EPA and Tayseer Mahmoud, Project Manager, Cal-EPA DTSC

Mr. Kistner spoke briefly on three topics and provided copies of handouts (letters) to RAB members. First, he said U.S. EPA approved the Draft Final Feasibility Study Report for Operable Unit (OU) 2C, Landfill Sites 3 and 5, the letter formally confirmed the Agency's approval. Second, regarding SWDIV's proposed schedule for remedial design/remedial action (RD/RA) for Site 24, VOC Source Area soil vapor extraction, he said the Agency felt that the schedule could be stepped up and modified. The U.S. EPA reasoned that by having the soil vapor extraction system transferred from Norton Air Force Base to MCAS El Toro, this would eliminate the need for the 30%, 50%, and 90% design submittals. The U.S. EPA and the Marine Corps agreed that by waving the preliminary design submittal stages, the

100% submittal date could be moved from October 1998 to May 1998. The U.S. EPA focused on the placement of vacuum wells (screened intervals, pumping rates, etc.). Third, Mr. Kistner provided U.S. EPA's comments on the draft Proposed Plan for the landfill sites. After the various alternatives were considered, the U.S. EPA agreed that "Alternative 3" (capping with a four-foot native soil cap combined with institutional controls and environmental monitoring) met the requirements for being protective of public health and the environment for all four landfill sites. He stated that there are other closure alternatives for Sites 3 and 5 and that the U.S. EPA would support those alternatives if they are consistent with reuse. He added, that at this time in the reuse planning stage, Alternative 3 is the most appropriate option.

Mr. Mahmoud spoke briefly on two topics and also provided RAB members with handouts of DTSC comments (letters). First, DTSC reviewed the Round 6 Groundwater Monitoring Report. He said that DTSC had concerns with the protocol and quality control and that the data may not be satisfactory for the final Station-wide monitoring plan because of high turbidity. Second, DTSC reviewed the draft Proposed Plan for closure of the Station's landfills. DTSC agrees with the Marine Corps that Alternative 3 is best suited for Sites 2 and 17, but believes other alternatives for Sites 3 and 5 are more protective and suitable for reuse. For Site 3 he identified Alternatives 5B or 6C (both are asphalt caps) as better for supporting future light industrial or commercial reuse of the property. For Site 5, he said Alternative 4D (single-barrier cap, synthetic flexible membrane liner, with institutional controls and environmental monitoring) appears to be more appropriate for a future recreational use scenario, such as a golf course. He also stated that the Marine Corps and Navy should have a dialog with Orange County's Local Redevelopment Authority (LRA) for El Toro so they can come to an agreement in reaching a suitable remedy that is compatible with reuse of the property for Sites 3 and 5.

Question & Answer (Q&A) Discussion

A RAB member asked if there is a possibility that landfills could be removed from the Station and if there would be funds available for closure alternatives other than Alternative 3. Mr. Kistner noted that any funds, whether budgeted or not would be the responsibility of the Department of the Navy (DON) and not the U.S. EPA. Mr. Joyce interjected that the budget for landfill closures is based on conceptual cost estimates outlined in the feasibility studies. He added that detailed evaluations were performed on various closure alternatives for capping the landfills. These alternatives included institutional controls and monitoring. An alternative with only institutional controls and environmental monitoring, as well as a No Action (do nothing at all) alternative were also evaluated. Mr. Joyce also said that removal of the landfill materials were previously evaluated and were not considered a feasible option for the final remedy.

A RAB member questioned Mr. Kistner whether U.S. EPA agrees with the State of California's Regional Water Quality Control Board's (RWQCB) point of view regarding the Interim Record of Decision (ROD) for Site 24, VOC Source Area soil cleanup. Mr. Kistner reminded RAB members that U.S. EPA and the other members of the BRAC Cleanup Team (BCT) signed the interim ROD acknowledging agreement with the cleanup goals and the

methods to achieve them. He said that the U.S. EPA is anxious to begin remediation at Site 24 and that they support the cleanup goals and the 40-foot mixing zone. He also said that because this is interim and not final there are still some issues regarding cleanup criteria that will be determined in a final ROD. The interim ROD allows the soil cleanup effort to move forward. Mr. Joyce added that there will be other opportunities for the RAB and its subcommittees to discuss cleanup criteria for the groundwater during the development process and the public comment period for the Proposed Plan. Mr. Kistner concluded that he is not prepared tonight to discuss the RWQCB's position.

A question was raised about the concern expressed in the DTSC's letter of whether the Marine Corps was meeting with the LRA. Mr. Joyce said that the Marine Corps meets regularly with LRA staff, provides staff with tours of the sites, and discusses environmental issues associated with environmental cleanup and proposed remedies on an ongoing basis.

RAB members mentioned that regulatory agency comments are regularly presented at RAB meetings. A request was made for information on how the Marine Corps responds to agency comments. Mr. Joyce recognized this request, in the future the Marine Corps will provide a response to agency comments.

MCAS El Toro Environmental Updates - Bernie Lindsey, Remedial Project Manager, Southwest Division Naval Facilities Engineering Command (SWDIV):

- 1. Soil Vapor Extraction Equipment Transfer to MCAS El Toro!**
- 2. OU-3A Feasibility Study (Sites 8, 11 and 12); and**
- 3. VOC Source Area Activities**

1. Soil Vapor Extraction Equipment Transfer to MCAS El Toro

In regards to the first update, Mr. Lindsey explained that Norton Air Force Base (AFB) in San Bernardino had a very similar situation as MCAS El Toro with solvent contamination in soil and groundwater (primarily TCE or trichlorethene). He explained that the contaminated soil at Site 24 (subsurface soil located above the water table) serves as the chemical source and starting point for low-level groundwater contamination that is present in the regional groundwater. Soil vapor extraction (SVE) provides the most technically feasible and cost-effective method for soil cleanup at Site 24. Mr. Lindsey explained that SVE is a simple process that physically separates VOCs from the soil. By applying a vacuum to a network of SVE wells, VOCs are pulled to the surface as a vapor. This vapor is passed through an activated carbon filter to trap VOCs before the air is discharged to the atmosphere. When the activated carbon filters become saturated with VOCs, the carbon is returned to the manufacturer where it is regenerated and the VOCs are destroyed. SVE is a proven treatment technology and has been successfully implemented at sites throughout the country. He added that numerous pilot tests performed at Site 24 have shown that SVE is viable. The DON and the regulatory agencies agreed by signing the Interim ROD that SVE is the best technology for cleaning up solvent-contaminated soil at Site 24.

The Marine Corps began discussions with Air Force staff in summer 1996 to learn more about how the Air Force used SVE technology for their cleanup effort. Mr. Lindsey pointed

out that the environmental oversight agencies for Norton AFB are identical to MCAS El Toro (U.S. EPA Region IX, DTSC Region 4, and the Santa Ana RWQCB. These agencies approved the design and use of the SVE system that operated at Norton AFB. The system was proven to be successful and soil treatment was completed in fall 1997. With the signing of the Interim ROD for soil cleanup at MCAS El Toro using SVE, the Marine Corps began the process to transfer the SVE equipment used at Norton AFB to MCAS El Toro. Mr. Lindsey said that the environmental agencies are in favor of the equipment transfer. The Marine Corps has begun working with the Air Force to determine the necessary steps that need to be taken to disassemble and transfer the equipment. He also showed the RAB 35mm slides of the SVE equipment compound and system at Norton AFB.

A RAB member asked if there was sufficient data to suggest that SVE equipment is effective at Norton AFB. Mr. Lindsey explained that the Norton AFB site is quite similar to Site 24 at MCAS El Toro. A two year period was predicted for SVE cleanup at Norton AFB. The system was installed, tested, successfully operated, and the site was signed off as clean by U.S. EPA, DTSC, and RWQCB two years after the cleanup effort began. Mr. Joyce emphasized that since the equipment used at Norton AFB was demonstrated to work successfully in the field, it makes sense for MCAS El Toro to acquire it. Obtaining proven equipment is cost-effective and presents a considerable cost savings and is a prudent move in this era of tight budgets. He explained that there is no cost for purchasing the Norton AFB equipment but there are costs associated with transportation, assembly, and testing of the equipment.

2. OU-3A Feasibility Study (Sites 8, 11 and 12)

The second update focused on the OU-3A Feasibility Study (FS) for Sites 8, 11, and 12. Mr. Lindsey explained that the Draft FS report was submitted to the BCT in summer 1997 and the Agencies completed their review in November and Responses to Comments are being prepared. It is anticipated that the Draft Final FS Report for these three sites will be issued in January 1998. The Agencies will have 30 days to comment on the Draft Final.

Mr. Lindsey explained that the soil at these sites is contaminated with polyaromatic hydrocarbons (PAHs), polychlorinated biphenals (PCBs), or metals. Cleanup alternatives evaluated in the FS included no action; capping with restrictions; excavation and using soil as cover material for the landfill caps at Site 2 and/or Site 17 landfills; and excavation and various options involving on-site treatment and off-Station disposal at an approved landfill facility. He explained that Site 8 is where the Defense Reutilization and Marketing Office (DRMO) Storage Area is located. Surface soil is contaminated with PAHs and PCBs. Site 11 is the Transformer Storage Area and surface soil is contaminated with PCBs from leaking transformers that have since been disposed off-Station. At Site 12, the Sludge Drying Beds and an adjacent drainage ditch, PAHs and metals are present in the surface soil. If soil is excavated, the deepest excavations are estimated to be from 6 to 8 feet below the ground surface.

RAB members asked questions regarding excavation of soil from Sites 8, 11, and 12. First, if soil is redisposed in a landfill at Site 2 (and/or Site 17) what is done to assure that the landfill is protected? Mr. Lindsey said that if soil is redisposed in a Station landfill it would

not be spread out over the existing cap and just left there but would be engineered so the soil is placed within the landfill cap. Also, the chemicals of concern in the excavated soil are relatively immobile. At the request of Mr. Joyce, Mr. Kistner further explained that the body of data gathered by U.S. EPA from throughout the country for uncapped sites with PCBs present in surface soils shows that PCBs adhere to the soil and do not migrate. Another RAB member asked how moving soil from Sites 8, 11, and 12 would make these sites safe? It was explained that after removing contaminated soil and confirmation sampling is performed, the excavations would be backfilled with clean soil, then no other actions would be necessary and these sites would be clean without restrictions for reuse.

3. VOC Source Area Activities

For the third update, Mr. Lindsey showed a series of 35mm slides that focused on groundwater pilot studies and testing at Site 24. Planning began in November 1996 and field work commenced in June 1997. This has involved a lot of cooperation between the members of the BCT members and support staff and since June 1997 there have been 20 weekly meetings directly geared toward the field work. Those that regularly participate in these meetings include the Marine Corps, SWDIV, U.S. EPA, DTSC, RWQCB, and support contractors. Pilot testing involves characterizing the migration of VOCs (primarily TCE) in the aquifer, characterizing the stratigraphy and lithology of the underground soils, comparison of VOC removal between groundwater extraction and SVE-enhanced groundwater extraction, and groundwater testing and data analysis.

Currently, field technicians are in the process of installing groundwater extraction wells. The slides showed technicians using a cone penetrometer (CPT) to obtain data on stratigraphy and lithology to assist in well placement. Other slides showed the extraction wells being drilled and completed. He explained that extraction wells are installed to depths of approximately 200 feet from the ground surface. Also, reinjection wells are also being constructed. Extracted water will be pumped to holding tanks, undergo carbon treatment to remove solvents, tested, and then be reinjected back into the aquifer. The pilot test system is being built so it can operate automatically. Safety systems are incorporated for automatic shutdown if a problem arises.

MCAS El Toro Landfills, Sites 2, 3, 5, and 17 - Institutional Controls – Dr. Dante Tedaldi, Ph.D. and P.E., Project Manager, CLEAN II (Bechtel Corporation)

Mr. Joyce noted that a presentation on institutional controls had been requested by RAB members and community members on several occasions. He explained that the presentation had been postponed because the development of Department of Defense (DoD) policy on institutional controls has not been completed. The Defense Environmental Task Force which includes members of U.S. EPA, DoD, DON, regulatory agencies from California, Texas, and several other states, and community groups has been involved in creating this policy. To date, the policy has not been formalized. However, to satisfy RAB requests for a presentation on institutional controls, a presentation specific to MCAS El Toro Landfill Sites 2, 3, 5, and 17 has been prepared for tonight's meeting.

Mr. Joyce introduced Dr. Tedaldi and informed the RAB that he has been working for CLEAN II (Bechtel Corp. support contractor) as part of the MCAS El Toro base closure program since 1994.

Landfill Sites

Dr. Tedaldi began the presentation by reminding the RAB that the BCT includes Joseph Joyce, BEC MCAS El Toro, Glenn Kistner of U.S. EPA, Tayseer Mahmoud from DTSC, and in a supporting role, Larry Vitale and John Broderick of the RWQCB in Santa Ana. In regards to the landfills, prior to initiating the Phase II Remedial Investigations/Feasibility Studies (RI/FS) for the landfills, the BCT agreed to adopt the U.S. EPA's presumptive remedy approach for landfills. The U.S. EPA has extensive nationwide experience in dealing with landfill closures. This approach focuses on identifying and evaluating proven methods for landfill closure that have specific application at MCAS El Toro. Currently, U.S. EPA has produced two sets of presumptive remedy guidance documents: one for municipal landfills, and another specifically for military landfills. Presumptive remedy guidance helps the BCT identify potential problems specifically associated with landfill containment. Additionally, presumptive remedy guidance accelerates completion of the various RI/FS efforts conducted for the landfills by allowing the BCT to focus on containment remedies.

Presumptive remedies for landfills incorporate a variety of components. Major components available which are typically evaluated in relation to landfill containment include: landfill capping; soil, gas or groundwater monitoring; institutional controls such as deed restrictions or lease conditions; leachate collection and treatment (only if landfill is already designed and constructed with an underground drainage system); landfill gas collection and treatment; and source area groundwater control.

Regarding landfill gas collection and treatment, Dr. Tedaldi said that some landfills, depending on the waste materials disposed into them, generate methane gas in amounts which vary during the life of the landfill. However, landfill gas generation and migration are not an issue at the MCAS El Toro landfills. At many landfills, source area groundwater control is necessary to prevent migration of landfill leachate. But at the Station landfills waste materials are above the water table so direct migration of wastes in groundwater is not an issue. After the evaluation of data collected in the RI, the presumptive remedies for the Station landfills were narrowed down. The main presumptive remedy components considered in the four landfill feasibility studies conducted for MCAS El Toro are: 1) landfill capping; 2) institutional controls; and 3) environmental monitoring. Dr. Tedaldi emphasized that the principal closure objectives as outlined in the FS reports are: protection of human health by preventing people from coming in direct contact with the landfill materials, and protection of the environment by eliminating or reducing the infiltration of surface water into the landfills. Both of these objectives can be accomplished by with the three main components of the presumptive remedy.

Dr. Tedaldi further explained that that the presumptive remedy approach allowed the BCT to focus on a condensed list of alternatives. Dr. Tedaldi discussed the alternatives that

underwent detailed evaluation in the FS reports. He also said that a draft Proposed Plan for closure of Stations landfills has been prepared by the Marine Corps for review by the BCT. (For the benefit of RAB members, descriptions of landfills closure alternatives listed below are more detailed than those listed in the presentation handout.)

- Alternative 1 (Sites 2, 3, 5 and 17) is a No Action alternative. Federal regulations require evaluation of this alternative in all FS reports. The No Action alternative determines what the environmental situation at each of the Station landfills would be if nothing was done and the current, existing conditions remained in their present state. Risks to human health and the environment were also considered under this scenario.
- Alternative 2 (Sites 2, 3, 5 and 17) involves implementing environmental monitoring and institutional controls alone without any engineering actions or controls.

The other alternatives all incorporate containment options with specific landfill capping designs and various components:

- Alternative 3 (Sites 2, 3, 5 and 17) entails using a monolithic (single-layer) soil cap with environmental monitoring and institutional controls. The monolithic soil cap consists of a layer of soil (4 feet thick minimum) placed over waste material to support vegetation. The soil to be used is commonly native material. The FS reports indicate the native soil as being more than adequate to provide required limitation on infiltration for landfill capping at the Station landfills. (Mathematical modeling was performed to predict the amount of water that would infiltrate through different types of landfill caps.) This alternative is the Marine Corps' preferred alternative for all four Station landfills.
- Alternative 4 (Sites 2, 3, 5 and 17) considers using a single-barrier cap with environmental monitoring and institutional controls. The cap would consist of foundation layer (2 feet thick minimum), a barrier layer (of either clay, soil/bentonite mix, geocomposite clay liner, or a synthetic flexible liner), and a 2-foot soil layer to support vegetation.
- Alternative 5 (Sites 2 and 17) entails using a single-barrier cap along with additional soil cover (4 feet thick minimum) to support vegetation and environmental monitoring and institutional controls. Components of the cap's barrier layer are the same as Alternative 4.
- Alternative 5 (Sites 3 and 5) considers using a pavement cap of either asphalt or concrete with environmental monitoring and institutional controls. The cap would also have a foundation layer layer (2 feet thick minimum).
- Alternative 6 (Sites 3 and 5) considers using a pavement cap of either asphalt or concrete with environmental monitoring and institutional controls. The cap would also have a foundation layer (2 feet thick minimum) overlain by a synthetic flexible membrane.

Dr. Tedaldi said that both the Marine Corps and the U.S. EPA believe that Alternative 3 is the most favorable alternative for all four Station landfills. He added that the Proposed Plan for the Station landfills is expected to be released for public review and comment in March

1998. The Draft Final FS reports are now available for review at the Information Repository (Heritage Park Regional Library, Irvine).

Institutional Controls

Dr. Tedaldi began this portion of the presentation by discussing the two main purposes or objectives for having institutional controls. First, is the protection of human health and the environment. The institutional controls are in place to prevent people from being exposed to landfill materials and to prevent people from taking actions which might result in degradation of the remedy. The second objective is to ensure that the engineered remedy is not damaged or adversely affected. The remedy has to work properly and by having institutional controls in place, it is protected from circumstances that might damage it.

Two major legal aspects or components of institutional controls are leasing conditions and deed restrictions, and provisions for access into the landfill area. Provisions for access, which can be formulated by lease conditions and deed restrictions allow Marine Corps, regulatory agency, and operations and maintenance personnel to get into the landfill area to monitor the remedy and perform maintenance and oversight activities to make sure the system is working properly. These are important components of any landfill remedy.

The Station's landfill sites will have certain land use restrictions:

- No residential use or daycare center use on the property.
- No excavation or construction that may disturb the landfill cover remedy. It is also important that the cap, the waste (landfill contents), and the monitoring system not be disturbed. If any excavation and construction, was to be done on the property it would have to be completely compatible with the design of the cap. The institutional control process determines ways to assess the compatibility of excavation and construction and to obtain approval for such activities.
- No unauthorized irrigation and vegetation at the landfill sites. Dr. Tedaldi explained that it is important to have some irrigation so that the vegetation that is part of the remedy can grow and be maintained as planned. This is important so the cap will not dry out and blow away in the dry season. Irrigation and vegetation designs will be specific to each landfill and both will have limitations as to what can be done with them.
- No removal of fences and signs is permitted. Normally, landfills have fencing around them with signage and notification which are used to prevent unauthorized entry into the site.
- No well installation and water extraction or injection of water into the aquifer is to occur at the landfill. Although this is not an issue at MCAS El Toro landfills, it still has to be considered in the land use restrictions.

Dr. Tedaldi said that this presumptive remedy and its environmental monitoring and institutional controls components does protect human health and the environment in a proven and very effective manner. He said that the surface of the landfills can be used as long as the

restrictions are adhered to. For more information, he noted two web pages which provide more information on institutional controls as well as on presumptive remedies (see last page of these meeting minutes).

Additional Discussion RAB Co-Chairs: Joseph Joyce and Greg Hurley

After Dr. Tedaldi's presentation, Mr. Joyce provided RAB members with two handouts: - "Institutional Controls, What they are and how they are used" (DoD BRAC Environmental Program Fact Sheet) and "Application of the CERCLA Municipal Landfill Presumptive Remedy to Military Landfills," (U.S. EPA, Quick Reference Fact Sheet) to provide RAB members with more information regarding landfills. He also pointed out the dates of RAB meetings in which landfills were discussed.

Mr. Greg Hurley, RAB Community Co-Chair, then presented his outlook on the issue of institutional controls. He began by stating that he believes in institutional controls but that there are some implications that are important for the community to comprehend. He noted that violations of the land use restrictions will nullify the federal Comprehensive Environmental Response, Compensation and Liability Act of 1980 [CERCLA, Section 120 (h)] obligations which states that the military will remediate the property. Violations will also nullify the 330 Indemnification, which is a promise from the military to come in and indemnify the end user and their tenants. The ramifications are that if the community opts to do additional work that is incompatible with the restricted land uses, then the community becomes the potentially responsible party under CERCLA. If in fact there is a violation, the military will not come back in and remediate, nor will they have any obligation under CERCLA and the indemnification is lost. Mr. Hurley stated that the landfill sites will have some type of institutional controls in place. He also mentioned that the details of the land use restrictions are very important because they will govern what the community can and cannot do with the landfills. He reminded the RAB that those details are the key and what needs to be focused on. Mr. Hurley reiterated that the properties will come with institutional controls which are a useful and necessary tool.

Q & A Discussion - MCAS El Toro Landfill Sites and Institutional Controls

A RAB member asked for clarification regarding the DoD's legal obligation concerning landfills after the base closure. Mr. Joyce responded that the DoD has an obligation to require restrictions that protect the CERCLA remedy. If restrictions were adhered to and there is a problem with the remedy, or something is identified that was not taken into consideration before and further remediation is needed, the DoD is still liable. He did reiterate that if the land use restrictions were violated by the future property owners, there would be some liability for the impacts to the CERCLA remedy.

A concern was raised on the level of flooding considered during the remedial investigations and feasibility studies for the landfills. This concern was specifically mentioned regarding Site 2 and its close proximity to the Borrego Canyon Wash, and the potential heavy rainfall runoff that could flow into the landfill from new housing developments upstream. Also,

another concern was stated regarding the disposal of PCBs from Site 11 into Site 2 and the affect that heavy water flow would have on the migration of that contamination. Mr. Lindsey said that the "100-year flood" scenario was considered during the remedial investigations and feasibility studies for the landfills. Mr. Joyce also responded by assuring the RAB that each one of the landfill sites would go through a remedial design which is specific to each site and would accommodate the conditions unique to each site. Also, RAB members were reminded that some erosion control measures were performed in 1996 and 1997 at Sites 2 and 17. These efforts will be incorporated into the designs for the final remedies of these sites.

Another member had a concern about severe rains and how they could affect the capping remedy and the chemicals present in the landfills. Mr. Joyce said that there are records and information from interviews with former employees on what types of wastes were disposed in the landfills. He said that the effects of rain on capping have been reviewed several times and are discussed in both the remedial investigation and the feasibility study reports which are available to RAB members for their review.

Further concern was raised regarding natural occurrences, in particular, if seismic activity and earthquakes have been considered in regard to the landfills. Mr. John Broderick, RWQCB project staff, at the request of Mr. Joyce, responded to this question. He said that the remedial designs of landfill caps specifically take earthquake activity and flooding into account. If the engineered remedy has been affected by an earthquake or flood, then it will have to be inspected and if the remedy needs repairs, it will be repaired. Mr. Joyce added that future natural disasters cannot be predicted, but if they do occur, and further funding was needed then, such funding would be pursued. Mr. Joyce said that several meetings with the regulatory agencies have been dedicated to the issue.

A question was raised regarding other uses of land, primarily light action uses, for the landfill sites, which would fit into the institutional controls. A RAB member asked if there were planned uses for Site 5 other than a golf course. Mr. Joyce responded that anything which would not be identified as a restriction or which won't impact the integrity of the cap, could be put on the property. Mr. Broderick said that the military and the LRA do not know what the end use is going to be, but they do know that the land will be available at the previously stated level of land use. Mr. Broderick added that in regards to landfills virtually anything, except for residential housing (and daycare centers), can be constructed on landfills. Constructing buildings, parking lots, and other facilities requires additional engineering concerns that must be addressed. He said that if a future property owner wanted to determine what the property could be used for, a specific proposal that includes all engineering factors would have to be generated and presented to the signatories of the Federal Facilities Agreement (FFA) for review. FFA signatories include the DON, U.S. EPA, DTSC, and the RWQCB.

Mr. Joyce reminded the RAB that 85% of the base is clean with unrestricted land use and that there are approximately 4,700 acres that comprise MCAS El Toro. Mr. Joyce said that the 975 acres of property consisting of the Site 2 and Site 17 landfills are to be transferred to the Department of Interior, another federal agency, for use as wildlife habitat areas. After

this federal agency to federal agency transfer, approximately 3,700 acres will be available for transfer and reuse. Of this, only 10 acres from areas that make up the Sites 3 and 5 landfills will have land use restrictions and institutional controls.

Mr. Joyce was asked if there would be continued monitoring of Sites 3 and 5. He told the group that it is the DON's responsibility to develop a monitoring plan specific to the landfills (to protect and monitor the remedy) and to present the plan to the regulatory agencies for their approval. In addition to the landfill sites, a long-term groundwater monitoring plan will be established for the entire Station. Once these monitoring plans are in place, the U.S. EPA, DTSC, and the RWQCB will provide oversight to the DON to make sure the regulatory requirements stated under CERCLA are met. In addition, institutional controls and deed restrictions will be identified clearly in the property transfer records to the new owners, and as part of the continued monitoring to ensure that the remedy selected is effective. The DON will inspect and evaluate the landfill sites to make sure that the remedy is in place and that there are no violations of the conditions. Oversight for these activities will be provided by the regulatory agencies.

Mr. Joyce reminded RAB members that there will be a formal public comment period for the Proposed Plan for landfills so the RAB and the public will have further opportunities to comment on these issues. He ended the question/answer period by saying that the DON is currently moving towards implementing the remedy within the CERCLA process, and that the goal is to close out all the CERCLA sites at MCAS El Toro in a timely manner.

MEETING EVALUATION AND FUTURE TOPICS

During the meeting evaluation RAB members provided the following comments:

- Topic of Institutional Controls great topic
 - Discussion took more time than allotted
 - Suggestion was made to continue discussion on this topic when more specific data is available.
- One of better meetings, presentations were good, speakers well informed.
- Best to have questions after presentation.
- Need to stick to 9:00 p.m. end time.
- Constraints of agenda, extra time needed tonight.

Suggestions for future presentation topics include:

No future topics discussed

CLOSING ANNOUNCEMENTS/FUTURE MEETING DATES

The next RAB meeting is scheduled for 6:30 to 9:00 p.m., Wednesday, January 28, 1998 at the Irvine City Hall, Conference and Training Center, One Civic Center Plaza, Irvine.

The meeting was adjourned at 9:15 p.m.

Attachments:

-Sign-in sheets.

Handouts provided at the meeting and available at the Information Repository:

- RAB meeting agenda/Public notice - 12/3/97 RAB meeting.
- RAB draft meeting minutes - 9/24/97 RAB meeting.
- Presentation - "Updates on MCAS El Toro Activities: DoD Equipment Transfer of Soil Vapor Extraction Equipment, OU-3A Feasibility Study, VOC Source Area Activities" by Bernie Lindsey, Remedial Project Manager, Southwest Division Naval Facilities Engineering Command.
- Presentation - "MCAS El Toro Landfills and Institutional Controls" by Dante J. Tedaldi, Ph.D. and P.E., Project Manager (CLEAN II/Bechtel Corp.) MCAS El Toro and MCAF Tustin
- Handout, "Institutional Controls, What they are and how they are used" Dept. of Defense, Office of the Deputy Under Secretary of Defense, Environmental Security, BRAC Environmental Program Fact Sheet, Spring 1997.
- Handout, "Application of the CERCLA Municipal Landfill Presumptive Remedy to Military Landfills," U.S. EPA, Office of Solid Waste and Emergency Response, Quick Reference Fact Sheet, December 1996.

- Agency Comments - U.S. Environmental Protection Agency

- U.S. EPA Approval of Draft Final Feasibility Study Reports for Operable Unit 2C - Sites 3 & 5, MCAS El Toro, August 14, 1997 (letter dated November 3, 1997)
- U.S. EPA Comments on Draft Proposed Plan for Closure of Inactive Landfills, Sites 2, 3, 5, and 17, MCAS El Toro (letter dated November 3, 1997).
- U.S. EPA Response to Proposed RD/RA Schedule for MCAS El Toro (letter dated November 5, 1997).

- Agency Comments - Cal-EPA, Department of Toxic Substances Control

- Cal-EPA DTSC Comments on Round 6 Groundwater Monitoring Report, MCAS El Toro (letter November 12, 1997).
- Cal-EPA DTSC Comments, Draft Proposed Plan for Operable Units 2B (Sites 2 & 17) and 2C (Sites 3 & 5), MCAS El Toro (letter dated November 17, 1997).

A copy of these minutes and the handouts provided at the RAB meeting 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 phone number is (714) 551-7151. Library hours are Monday through Thursday, 10 am to 9 pm; Friday and Saturday, 10 am to 5 pm; Sunday 12 pm to 5 pm.

Navy and Marine Corps Internet Access - Environmental Web Sites

RAB meeting minutes are also located on the Navy's Southwest Division Environmental Web Page. There are two different internet addresses, both sites are identical and either one can be used.

<http://www.efdswest.navy.mil/pages/Envrnm1.htm>

Marine Corps Air Bases Western Area Web Site:

For more information on environmental cleanup activities at MCAS El Toro.

www.ete.usmc.mil/BRAC/main.htm

Department of Defense - Environmental BRAC Web Page

Contains information concerning presumptive remedies.

www.dtic.mil/environdod/envbrac.html

U.S. EPA Superfund Web Page

Has information regarding institutional controls.

www.epa.gov/superfund/index.html

MCAS L TORO
RESTORATION ADVISORY BOARD MEETING
January 28, 1998

RAB MEMBER SIGN-IN SHEET

Name	Signature	Name	Signature
Barney, Col. Joseph P. (ret)	<i>J. P. Barney</i>	McVicker, Robert R.	
Bennett, Dr. Charles	<i>Charles Bennett</i>	Meier, Fred J.	
Brady Jr., Paul		Mountford, Dan	
Britton, George		Murphy, Don	
Cohn, Enid		Olquin, A. Richard	
Crompton, Chris	<i>Chris Crompton</i>	Reavis, Gail	<i>Gail Reavis</i>
Gallagher, George M.		Ritchie, Col. E.J.	<i>Col. E.J. Ritchie</i>
Hayes, Finola		Rudolph, Marcia	<i>Marcia Rudolph</i>
Herndon, Roy		Shayegan, Maria	<i>Maria J. Shayegan</i>
Hurley, Greg - Co-Chair	<i>Greg Hurley</i>	Sievers, Larry	
Hersh, Peter	<i>Peter Hersh</i>	Sipp, Jr., Myron L.	
Joyce, Joseph - Co-chair	<i>Joseph Joyce</i>	Speer, Steven, Ph.D.	<i>Steven A. Speer Ph.D.</i>
Kistner, Glenn	<i>Glenn Kistner</i>	Vasquez, Barbara	
Koepke, Jeffrey		Vitale, Larry	<i>Larry Vitale</i>
Mahmoud, Tayseer	<i>Tayseer Mahmoud</i>	Werner, Jerry	<i>Jerry Werner</i>
Matheis, Mary Aileen		Woodings, Bob	<i>Bob Woodings</i>
Mathews, Thomas	<i>Thomas Mathews</i>	Zweifel, Donald E.	<i>Donald Zweifel</i>

() = present for Introductions, forgot to sign in*

**MCAS EL TORO
RESTORATION ADVISORY BOARD MEETING
January 28, 1998**

**NON-RAB MEMBER SIGN-IN SHEET
Other Attendees, Guests**

NAME <u>Please print clearly</u>	AFFILIATION	MAILING ADDRESS	PHONE FAX	INTERESTED IN RAB MEMBERSHIP?
HARRIET BEHRENS	LANDSCAPE DESIGN CRITIC OF CALIFORNIA GARDEN CLUBS, INC.	21892 MONTBURY DR. LAKE FOREST CA 92630	(714) 707-4661	YES
MARTIN J. L. BEHRENS	LCDR USN RET'D	9 9 9	9 9	
DAVID SALAH	SIERRA CLUB	90 STREAMWOOD IRVINE 92620	730-6832	?
SCOTT KEHE	US NAVY	PO BOX EL TORO	(714) 726-2506	
CLIFFTON WALLACE	BRAC USMC	14 Sheridan Irvine CA 92620	714 726-3389	
Tom Villeneuve	Tetra Tech Inc	348 West Hospitality Lane 599 Bevardiair 92608	#300 909-381-1674	
Jack Cotter	LCC	30842 Driftwood So. Laguna 92657	494-0015	

CONFIDENTIAL RECORD

PORTIONS OF THIS RECORD ARE CONSIDERED
CONFIDENTIAL AND ARE NOT FOR PUBLIC VIEWING

THE NAME, ADDRESS AND PHONE NUMBER OF A
PRIVATE CITIZEN HAS BEEN REDACTED IN
ACCORDANCE WITH THE PRIVACY ACT

QUESTIONS MAY BE DIRECTED TO:

**DIANE C. SILVA
RECORDS MANAGEMENT SPECIALIST
SOUTHWEST DIVISION
NAVAL FACILITIES ENGINEERING COMMAND
1220 PACIFIC HIGHWAY
SAN DIEGO, CA 923132**

TELEPHONE: (619) 532-3676

MCAS L TORO
RESTORATION ADVISORY BOARD MEETING
January 28, 1998

NON-RAB MEMBER SIGN-IN SHEET
Other Attendees, Guests

NAME <u>Please print clearly</u>	AFFILIATION	MAILING ADDRESS	PHONE FAX	INTERESTED IN RAB MEMBERSHIP?
JOSEPH FARBER	CITY OF IRVINE	P.O. Box 19585 IRVINE 92623-9585	714.724-6365 714.724.6440	
LARRY VITALE	RWQCB			
Donald E. Wentz	Genesis Industries	PO Box 17342 Anaheim Hills CA 92817	(909) 861-3844	No

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MCAS EL TORO

RESTORATION ADVISORY BOARD MEETING

January 28, 1998

NON-RAB MEMBER SIGN-IN SHEET

Other Attendees, Guests

NAME <u>Please print clearly</u>	AFFILIATION	MAILING ADDRESS	PHONE FAX	INTERESTED IN RAB MEMBERSHIP?
Lynn Hornecker	US Navy		619 532 4162 619 532 4160	NO
Candy Haggard	LRA		714 834 3033 714 834 7650	
	USMC BRAC			NO
STEVEN SHARP	ORANGE COUNTY LEA	2009 E. EDENLIER SANTA ANA, CA 92705	714 667-3623	
MUMMA	—	1409 Samba Way Littlerock	444 8988	✓
TERRY BURGESSNER	NVA		552 3548	
AUGAN GROSSNA	—			

CONFIDENTIAL

MCAS L TORO
RESTORATION ADVISORY BOARD MEETING
January 28, 1998

NON-RAB MEMBER SIGN-IN SHEET
Other Attendees, Guests

NAME <u>Please print clearly</u>	AFFILIATION	MAILING ADDRESS	PHONE FAX	INTERESTED IN RAB MEMBERSHIP?
Louis Mista	Navy			

MCAS EL TORO Schedule Update

Federal Facility Agreement

Restoration Advisory Board Meeting
28 January 1998

Andy Piszkin
c:\briefs\rab\ffa981

1

VOC Source Area Vadose Zone Soils

- **Remedial Design/ Action Work Plan - Agency Review***
 - » January - March, 1998
- **Remedial Design with Construction Quality Assurance, Quality Control, and Contingency Plans - Agency Review**
 - » May - July, 1998
- **Project Closeout Report - Agency Review**
 - » January - March, 2002

2

VOC Groundwater Source (Site 24) & Regional (Site 18)

- **Final Feasibility Study (Site 24) - Agency Review***
 - » Concurrence due February 27, 1998
- **Proposed Plan - Agency Review**
 - » May - July, 1998
- **Public Comment Period**
 - » October - November, 1998
- **Record of Decision - Agency Review**
 - » February - April, 1999
- **Record of Decision - Anticipated Signing**
 - » July 1999

3

Landfill Sites (2 & 17 and 3 & 5)

- **Final Proposed Plan - Agency Review***
 - » Concurrence due March 2, 1998
- **Public Comment Period**
 - » March 16 - May 14, 1998
- **Public Meeting**
 - » April 29, 1998
- **Record of Decision - Agency Review**
 - » June - August, 1998
- **Record of Decision - Anticipated Signing**
 - » November 1998

4

Further Action OU-3 Sites (8, 11, & 12)

- **Final Feasibility Study - Agency Review***
 - » Concurrence due February 13, 1998
- **Proposed Plan - Agency Review**
 - » April - June, 1998
- **Public Comment Period**
 - » September - October, 1998
- **Record of Decision - Agency Review**
 - » December 1998 - February 1999
- **Record of Decision - Anticipated Signing**
 - » May 1999

5

OU-3 Sites (7, 14, & 16)

- **Remedial Investigation (7 & 14) - Agency Review**
 - » August - October, 1998
- **Feasibility Study - Agency Review**
 - » March - May, 1999
- **Proposed Plan - Agency Review**
 - » October - December, 1999
- **Public Comment Period**
 - » April - May 1999
- **Record of Decision - Anticipated Signing**
 - » October 2000

6

OU-3 Site 1

- **Remedial Investigation - Agency Review**
 - » January - February, 2000
- **Feasibility Study - Agency Review**
 - » September - November, 2000
- **Proposed Plan - Agency Review**
 - » April - June, 2001
- **Public Comment Period**
 - » September - October 2001
- **Record of Decision - Anticipated Signing**
 - » May 2002

7

**DoN/MCAS El Toro
Landfill Sites 3 & 5 Proposed Plan**

**Response to Regulatory Agency
Comments**

**Restoration Advisory Board
Meeting
28 January 1998**

1

BRAC Cleanup Team (BCT)

- BEC--Joseph Joyce
- USEPA--Glenn Kistner
- DTSC--Tayseer Mahmoud
- CRWQCB--Larry Vitale (FFA)

2

Background on Landfills

<u>Site</u>	<u>Size (ac)</u>	<u>Operational Period</u>	<u>Inactive</u>
2	27	late 1950's to 1980	18 yrs
17	11	1981 to 1983	15 yrs
3	11	1943 to 1955	43 yrs
5	2	1955 to late 1960's	~30 yrs

3

History of the MCAS El Toro Approach to Landfills

- **BCT Agreed on USEPA's Presumptive Remedy Approach**
 - » Define landfill boundaries, not contents
 - » Capping and monitoring
 - » Institutional controls
 - » No excavation

4

History of Approach

(cont'd)

- Remedial Investigation (RI) and Analysis of Alternatives Conducted Since 1994
- Agency Comments on Reuse and Institutional Controls Addressed within Final Feasibility Study (FS)
- Final RI and FS Receive Concurrence from Regulatory Agencies in 1997
- DoN Moves Forward with Draft Proposed Plan

5

Alternatives Examined

- 1 - No Actions
 - 2 - Institutional Controls and Monitoring
- Containment and Alternative 2 Components
- 3 - Monolithic Soil Cap
 - 4 - Single-Barrier Cap
 - 5 - Single-Barrier Cap with Additional Components
 - 6 - Single-Barrier Cap with Pavement

6

Preferred Alternative for Landfills

- **CRWQCB Recommends Use of Monolithic Caps (Alternative 3) for Southern CA**
- **Alternative 3 Supported by DoN, USEPA, DTSC, and CRWQCB at BCT Meeting (1 July 1997)**

7

Proposed Plan Process

- **Step 1 - DoN Prepares Draft Proposed Plan for Agency Review**
- **Step 2 - DoN Addresses Agency Comments**
- **Step 3 - Final Proposed Plan Released for Public Review and Comment**
 - » **Public participation in remedy selection**
 - » **Public comment period with public meeting**

8

USEPA General Comments

- **USEPA “generally agrees with DoN's selection of Alternative 3” for Sites 3 and 5**
- **USEPA also supports Alternative 4d for Site 5**
- **Alternatives 5 and 6 “potentially expand reuse options” for Site 3**

9

DoN Response to USEPA Comments

- **DoN considered reuse issues at Sites 3 & 5**
- **Alternative 3 is compatible with reuse**
 - » **Reuse plan is at conceptual stage**

10

CRWQCB General Comments

- **Concurrence on Draft Proposed Plan**
- **No comments submitted**

11

DoN Response to CRWQCB Comments

- **DoN Concurs with CRWQCB**

12

DTSC General Comments

- **DTSC requests a separate Proposed Plan for Sites 3 and 5**
- **DTSC does not agree that future uses of Sites 3 and 5 could be accommodated by Alternative 3**
- **DTSC requests that the LRA be consulted to reconcile environmental priorities with reuse priorities**

13

DoN Response to DTSC Comments

- **Reuse issues were considered and Landfill Proposed Plan is best managed as one Proposed Plan**
- **Alternative 3 is the most appropriate remedy to support the future uses of Sites 3 and 5**
- **Meetings between the Marine Corps and the LRA have been ongoing and will continue**

14

DTSC General Comments

(cont'd)

- **DTSC recommends the Base Transition Coordinator work with LRA and RAB to ensure awareness of Proposed Plan**
- **If reuse objectives cannot be achieved, the LRA can revise the reuse plan accordingly**
- **Alternatives 5b and 6b have a better likelihood of supporting future reuse at Site 3**

15

DoN Response to DTSC Comments (cont'd)

- **Base Transition Coordinator meets with the LRA staff regularly and the RAB is provided detailed site information at scheduled meetings**
- **The December 1996 Community Reuse Plan acknowledged constraints on reuse at Sites 3 & 5**
- **The Reuse Plan is conceptual and any alternative may require modification. Alternative 3 is the most appropriate remedy to support the future uses of Site 3 and the least costly to modify if required**

16

DTSC General Comments

(cont'd)

- **The statement in the Draft Proposed Plan that Alternative 3 is “easy to modify” is misleading**
- **The LRA’s request to modify the remedy could be denied by the Marine Corps and/or regulatory agencies**

17

DoN Response to DTSC Comments (cont'd)

- **The Reuse Plan is conceptual and any alternative may require modification. Alternative 3 is likely to be the easiest and the least costly to modify, if required**
- **The Marine Corps could support remedy modifications as long as the CERCLA remedy remains protective of human health and the environment**

18

DTSC General Comments

(cont'd)

- **Alternative 4d, synthetic flexible membrane liner, appears to be more appropriate for a future recreational use scenario, such as the golf course at Site 5**
- **A fenced landfill cap constructed of native soil and vegetated with drought-resistant annual grasses would not be compatible with either industrial/commercial or recreational (golf) uses**

19

DoN Response to DTSC

Comments (cont'd)

- **The Reuse Plan is conceptual and any alternative may require modification. Alternative 3 is the most appropriate remedy to support the future uses of Site 5 and the least costly to modify, if required**
- **The reuse plan recognizes constraints associated with the inactive landfills. A monolithic cover can be incorporated into the next phases of reuse planning in the areas of both Sites 3 and 5. Initially, a fence is the most conservative means of protecting the remedy.**

20

DTSC General Comments

(cont'd)

- **“DTSC recommends that discussions be held between the BCT and the LRA, which may lead to a compromise between maintaining the protectiveness of the landfill cover and designing the landscaping for a golf course scenario.”**
- **In our opinion, the remedial action may not be implemented until after 1999 when the base is to be closed and transferred to the LRA**

21

DoN Response to DTSC

Comments (cont'd)

- **Compromise of the integrity and protectiveness of a landfill cover is inappropriate**
- **Operational closure is scheduled for July 1999. The landfill areas are not planned for transfer until remedial actions are in place**

22

Next Steps

- **Continue DoN/LRA Coordination**
- **Agency Concurrence with Draft Final Proposed Plan**
- **Present Final Proposed Plan to Public for Review and Comment**

MCAS El Toro Landfills - Alternatives Evaluated

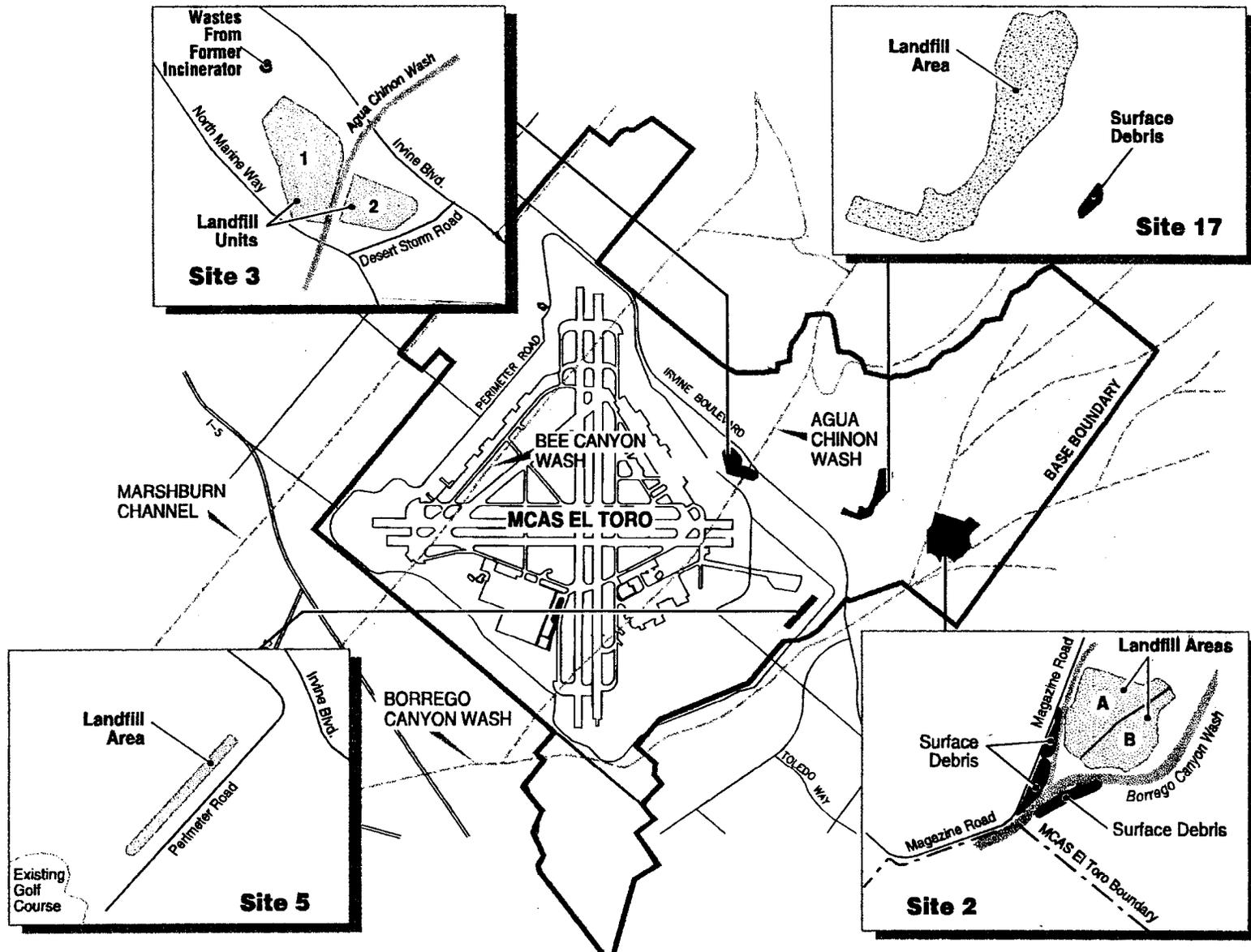
(excerpted from MCAS El Toro RAB Meeting Minutes, 12/3/97 Meeting, page 8)

- **Alternative 1 (Sites 2, 3, 5 and 17)** is a No Action alternative. Federal regulations require evaluation of this alternative in all FS reports. The No Action alternative determines what the environmental situation at each of the Station landfills would be if nothing was done and the current, existing conditions remained in their present state. Risks to human health and the environment were also considered under this scenario.
- **Alternative 2 (Sites 2, 3, 5 and 17)** involves implementing environmental monitoring and institutional controls alone without any engineering actions or controls.

The other alternatives all incorporate containment options with specific landfill capping designs and various components:

- **Alternative 3 (Sites 2, 3, 5 and 17)** entails using a monolithic (single-layer) soil cap with environmental monitoring and institutional controls. The monolithic soil cap consists of a layer of soil (4 feet thick minimum) placed over waste material to support vegetation. The soil to be used is commonly native material. The FS reports indicate the native soil as being more than adequate to provide required limitation on infiltration for landfill capping at the Station landfills. (Mathematical modeling was performed to predict the amount of water that would infiltrate through different types of landfill caps.) This alternative is the Marine Corps' preferred alternative for all four Station landfills.
- **Alternative 4 (Sites 2, 3, 5 and 17)** considers using a single-barrier cap with environmental monitoring and institutional controls. The cap would consist of foundation layer (2 feet thick minimum), a barrier layer (of either clay, soil/bentonite mix, geocomposite clay liner, or a synthetic flexible liner), and a 2-foot soil layer to support vegetation.
- **Alternative 5 (Sites 2 and 17)** entails using a single-barrier cap along with additional soil cover (4 feet thick minimum) to support vegetation and environmental monitoring and institutional controls. Components of the cap's barrier layer are the same as Alternative 4.
- **Alternative 5 (Sites 3 and 5)** considers using a pavement cap of either asphalt or concrete with environmental monitoring and institutional controls. The cap would also have a foundation layer layer (2 feet thick minimum).
- **Alternative 6 (Sites 3 and 5)** considers using a pavement cap of either asphalt or concrete with environmental monitoring and institutional controls. The cap would also have a foundation layer (2 feet thick minimum) overlain by a synthetic flexible membrane.

MCAS El Toro Location Map—Inactive Landfill Sites



Where To Get More Information:

Copies of Remedial Investigation and Feasibility Study reports, other key documents, and additional information relating to environmental cleanup activities at MCAS El Toro are available for public review at the following information repository:

Heritage Park Regional Library
14361 Yale Avenue
Irvine, CA
(714) 551-7151

Current hours:
Monday-Thursday 10am-9pm
Friday-Saturday 10am-5pm
Sunday 12pm-5pm

The Marine Corps encourages community involvement in the decision-making process of the environmental restoration program at MCAS El Toro. If you have any questions or concerns about environmental activities at the Station, please feel free to

Mr. Joseph Joyce
BRAC Environmental Coord.
Commanding General
AC/S, Environment (I AU)
MCAS El Toro
PO. Box 95001
Santa Ana, CA 92709-5001
(714) 726-3470

Mr. Andrew Bain
Community Involvement
Coordinator
Superfund Division
U.S. EPA
75 Hawthorne St. (SFD-3)
San Francisco, CA 94105
(800) 231-3075

Capt. Matthew Morgan
BRAC Public Affairs Officer
Marine Corps Air Bases
Western Area (I AS)
MCAS El Toro
P.O. Box 95001
Santa Ana, CA 92709-5001
(714) 726-3853

Ms. Marsha Mingay
Public Participation Coordinator
Cal-EPA
Department of Toxic Substances Control
245 West Broadway, Suite 350
Long Beach, CA 90802-4444
(562) 590-4881

Navy and Marine Corps - Internet Access Environmental Web Sites

Southwest Division Naval Facilities Engineering Command Web Site:

<http://www.efdswest.navfac.navy.mil/DEP/ENV/default.htm>

Marine Corps Air Bases Western Area Web Site:

www.ete.USMC.mil/BRAC/main.htm

Department of Defense - Environmental BRAC Web Page

www.dtic.mil/environdod/envbrac.html

U.S. EPA Superfund Web Page

www.epa.gov/superfund/index.html

MCAS El Toro
Installation Restoration Program

MAILING LIST COUPON

If you would like to be on the mailing list to receive information about environmental restoration activities at MCAS El Toro, please complete the coupon below and mail to: Commanding General, AC/S, Environment, (1AU), Attn: Mr. Joseph Joyce, IRP Department, MCAS El Toro, P.O. Box 95001, Santa Ana, CA 92709-5001.

- Add me to the MCAS El Toro Installation Restoration Program mailing list.
- Send me information on Restoration Advisory Board membership.

Name _____

Street _____

City _____ State _____ Zip Code _____

Affiliation (optional) _____ Telephone _____



Cal/EPA

Department of
Toxic Substances
Control

245 West Broadway,
Suite 350
Long Beach, CA
90802-4444

January 13, 1998

Pete Wilson
Governor

Peter M. Rooney
Secretary for
Environmental
Protection

Mr. Joseph Joyce
BRAC Environmental Coordinator
U.S. Marine Corps Air Station - El Toro
P. O. Box 95001
Santa Ana, California 92709-5001

Dear Mr. Joyce:

**COMMENTS ON DRAFT SOIL VAPOR EXTRACTION PILOT TEST
SUMMARY REPORT, SITE 24 (VOC SOURCE AREA), MARINE CORPS AIR
STATION (MCAS) EL TORO**

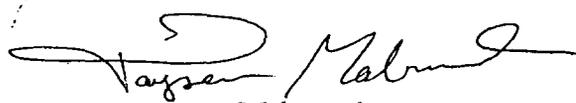
The Department of Toxic Substances Control (DTSC) has completed the review of the above subject document dated November 1997, prepared by Bechtel National, Inc. The report presents the results of soil vapor extraction (SVE) pilot tests conducted during 1996 and 1997 at Site 24, the VOC Source Area. SVE pilot tests were conducted to evaluate the feasibility of using SVE to remove VOCs from the contaminated soils at Site 24; evaluating SVE radius of influence; establishing the operating parameters to optimize SVE performance; and estimating the mass of VOCs removed during the pilot tests. The calculated amounts of VOCs removed as a result of the SVE pilot tests included TCE (821 pounds), Freon 113 (540 pounds), 1,1-DCE (78.2 pounds), and PCE (2 pounds).

DTSC concurs with the recommendations provided in Section 5.2 of the report. In particular, additional wells are necessary to characterize the permeability to airflow, radius of influence and soil gas time. We want to point out the discrepancy in the Borehole Log for boring number 24B9, in Appendix A, page A-12. A note at the bottom of the page states that "From 90-115 ft. (Below ground surface (bgs)), borehole was backfilled with bentonite chips. From 0-90 ft. (bgs), borehole was enlarged from 8" diameter to 12" diameter". This note is inconsistent with the well construction detail on page A-69 which states that the borehole was enlarged to 12" diameter from 0.0-112 feet bgs. If the well construction detail is correct, the boring log notes for boring number 24B9 should be revised in the final report.

Mr. Joyce Joseph
January 13, 1998
Page 2

If you have any questions, please call me at (562) 590-4891.

Sincerely,



Tayseer Mahmoud
Remedial Project Manager
Base Closure Unit
Office of Military Facilities
Southern California Operations

cc: Mr. Glenn R. Kistner
Remedial Project Manager
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Cal/EPA

January 26, 1998

Department of
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Control

245 West Broadway,
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Pete Wilson
Governor

Peter M. Rooney
Secretary for
Environmental
Protection

Mr. Joseph Joyce
BRAC Environmental Coordinator
U.S. Marine Corps Air Station - El Toro
P. O. Box 95001
Santa Ana, California 92709-5001

Dear Mr. Joyce:

**COMMENTS ON DRAFT BASE REALIGNMENT AND CLOSURE (BRAC)
CLEANUP PLAN, MARINE CORPS AIR STATION (MCAS) EL TORO**

The Department of Toxic Substances Control (DTSC) has completed the review of the above subject document dated January 1998. The report revises the March 1997 BRAC Cleanup Plan (BCP) for MCAS El Toro.

This letter is to transmit the enclosed DTSC comments on the draft BCP. If you have any questions, please call me at (562) 590-4891.

Sincerely,

Tayseer Mahmoud
Remedial Project Manager
Base Closure Unit
Office of Military Facilities
Southern California Operations

Enclosure

cc: See next page.

Mr. Joseph Joyce
January 26, 1998
Page 2

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DEPARTMENT OF TOXIC SUBSTANCES CONTROL
Comments on Draft BRAC Cleanup Plan
Marine Corps Air Station El Toro
Dated January 1998

The comments below were prepared by Mr. Tayseer Mahmoud, Remedial Project Manager, and Mr. Aaron Yue, Environmental Assessment and Reuse Specialist from the Department of Toxic Substances Control. Overall, the plan is well written and thorough. A few clarifications and modifications are needed as outlined in the comments below. Please incorporate the comments where appropriate.

GENERAL COMMENTS

1. Staff provided verbal comments during the BCP meeting held on January 21, 1998. Comments which pertained to formatting, typographical, or grammatical errors will not be repeated in this letter.
2. The draft BCP references some figures in each Chapter, but the figures are not provided. Please provide the figures mentioned in the documents.

SPECIFIC COMMENTS

1. **Executive Summary, Installation Restoration Program, page ES-6**

Please update the Status of OU-2B and OU-2C Feasibility Study Reports that were approved in November 1997.
2. **Executive Summary, Compliance Program Sites and Other LOCs, Exhibit ES-4, ES-5 and ES-6, page ES-8**

Please provide an explanation in the Executive Summary as to why the number of active Temporary Accumulation areas has increased from last year. Also, please clarify the changes in numbers from those reported last year for both PCB transformers and Oil/Water separators. Were these removed?

3. Executive Summary, Initiative for Accelerated Cleanup, Section 3, page ES-9

Please replace the term “CERFA-eligible” with “Environmental Condition of Property, Category 1” when describing properties where no release of hazardous substances has occurred, and with the term “eligible for transfer” for properties that fall under ECP categories 2-4. Also, please reconcile the differences in acreage reported in this section with the numbers reported on page 2-4, page 3-3, and Table 3-16.

4. Chapter 3, Section 3.1.2.2, Features of Potential Environmental Concern, page 3-11

The beginning of the last paragraph states that a former employee reported that mercury had leaked at the two water towers. However, the last sentence concluded that no reported mercury leaks are associated with the removal of the towers. Please provide more details to support this conclusion and to explain this apparent contradiction. Was soil sampling conducted?

5. Chapter 3, Section 3.2.4.3, Non-Transformer PCB Items, page 3-21

The last paragraph of this section states that ballasts in fluorescent light fixtures may contain PCBs, but a survey is not scheduled to be performed as part of base closure. Please indicate whether or not this information will be provided to the transferee via any real estate documents at time of transfer.

6. Chapter 3, Section 3.2.5, Asbestos, page 3-23

This section mentioned that only 54% of 506 buildings were inspected during the asbestos survey, and the results are provided in Table 3-11. The BCP, however, did not make any statements regarding the other 46% of the buildings. What is the proposed action by the Marines regarding the other buildings?

The last sentence of this section indicates that “none of the ACM is considered to be a threat to human health.” How did the Marines come to this conclusion? What basis is used for this determination? Are the buildings not accessible, or are they proposed for demolition, or is the asbestos non-friable? Please clarify the rationale for the conclusion.

7. Chapter 3, Section 3.2.9, Oil Water Separators, page 3-32, 1st paragraph

Please revise the 5th & 6th sentence to read as follows: "...Under tiered permitting state regulations, some treatment units (e.g., OWSs) are regulated as 'Conditionally Exempt'. The revised regulations became effective in January 1993; etc."

8. Chapter 3, Exhibit 3-8, page 3-37

The acreages listed in last year's table are identical to all columns of this exhibit except for "Croplands." Last year, this column was labeled "Vineyard and Orchards" and contains 44.8 acres. This year, the column is relabeled as "Croplands" and is described to contain 587.8 acres. That's a difference of 543 acres. Please reconcile the difference in acreage. Which is accurate?

9. Chapter 3, Section 3.4.8, page 3-45

The total acreage of property eligible for transfer is inconsistent. See comment #3 above.

10. Chapter 3, Sections 3.5.10 and 3.5.11, page 3-51

Please add references to Section 3.5.10, Federal Facility Agreement and Section 3.5.11, Environmental Impact Statement Process, which are missing.

11. Chapter 3, Table 3-12

The number of SWMUs/AOCs has been changed from last year's BCP update. Please provide an explanation in the Executive Summary as to why the numbers have changed.

12. Chapter 4, Section 4.2.4.2, PCB Storage Area, page 4-11

Please update the status of Site 11 (Transformer Storage Yard).

13. Chapter 4, Section 4.2.11, Lead-Based Paint, page 4-15

Currently, a disagreement still exists between the Marines and the regulatory agencies regarding sampling for Lead-Based Paint. As a signatory to the BCP, the State must also include language in the BCP which reflects our position regarding Lead-Based Paint. We propose the following paragraph be inserted in this section of the BCP.

“Currently, the regulators and the Marines disagree on the extent of lead investigation necessary at closing military facilities. U.S. EPA and DTSC maintain that lead in soil due to Lead-Based Paint is considered to be a CERCLA release. Although the U.S. EPA and DTSC disagree on the project-specific action level for lead, both agencies are adamant that soil screening for lead at various locations on MCAS El Toro is required prior to transferring property to the LRA.”

14. Chapter 5, Section 5.1, Environmental Restoration Program

Please update Figure 5-1, the Master Program Schedule for the Installation Restoration Program.