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TO: Commanding Officer
Naval Facilities Engineering Command
Southwest Division
Mr. Richard Selby, Code 57CS.RS (O)
Building 128
1220 Pacific Highway
San Diego, CA. 92132-5187

DATE: March 6, 1997

CTO #: 0103

LOCATION: MCAS El Toro

FROM: C. L. Carlisle
C. L. Carlisle, Project Manager

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Plan (BCP), DTD March 1997

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CLEAN II Program
Bechtel Job No. 22214
Contract No. N68711-92-D-4670
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March 6, 1997

Commanding Officer
Naval Facilities Engineering Command
Southwest Division
Mr. Richard Selby, Code 57CS.RS
Building 128
1220 Pacific Highway
San Diego, CA 92132-5187

Subject: Replacement Pages for the Base Realignment and Closure (BRAC) Cleanup Plan (BCP), Marine Corps Air Station, El Toro

Dear Mr. Selby:

Enclosed are replacement pages for the 1997 Base Realignment and Closure (BRAC) Cleanup Plan (BCP) for Marine Corps Air Station, El Toro. Please replace the appropriate sheets in any copies of the 1997 BCP you have received.

If you have any questions, please do not hesitate to contact Dimitri Hallerbach at (619) 687-8855 or me at (619) 687-8804.

Sincerely,



Craig L. Carlisle
Project Manager

CLC/sp

Enclosure: Replacement Pages for the Base Realignment and Closure (BRAC) Cleanup Plan (BCP)



Bechtel National, Inc. Systems Engineers-Constructors

property (area type 1: no disposal, release, and/or migration of contaminants has occurred). Property designated as area types 1 through 4 is suitable for transfer by deed. This property totals approximately 4,077 acres (85 percent) of Station property. The remaining real property has been identified as area type 5 (disposal, release, and/or migration has occurred, and removal or remedial actions are underway, but all required remedial actions have not yet been taken), area type 6 (disposal, release, and/or migration of contaminants has occurred, but no response actions have been taken), and area type 7 (unevaluated areas or areas requiring additional evaluation). The areal extent of land classified as area types 5, 6, and 7 is approximately 99 acres (2 percent), 469 acres (10 percent), and 167 acres (3 percent), respectively. Environmental restoration activities during 1996 have increased the Station land available for transfer (area types 1 through 4) from 2,992 acres to 4,077 acres. Currently, the Bake Parkway/Interstate 5 public highway expansion project is completed and will result in transfer of approximately 25 acres of MCAS El Toro property during 1997.

The scheduling and prioritizing of parcels for reuse based on the final CRP, will be provided by the LRA in 1997. The BCP will be updated as this information becomes available.

The County and the DON have entered into agreements permitting the transfer by quitclaim deed of the Bake Parkway/Interstate 5 right-of-way at fair market value. The DON issued a license for construction of the road for the Bake Parkway/Interstate 5 project, pending completion of a Finding of Suitability to Transfer and transfer deeds.

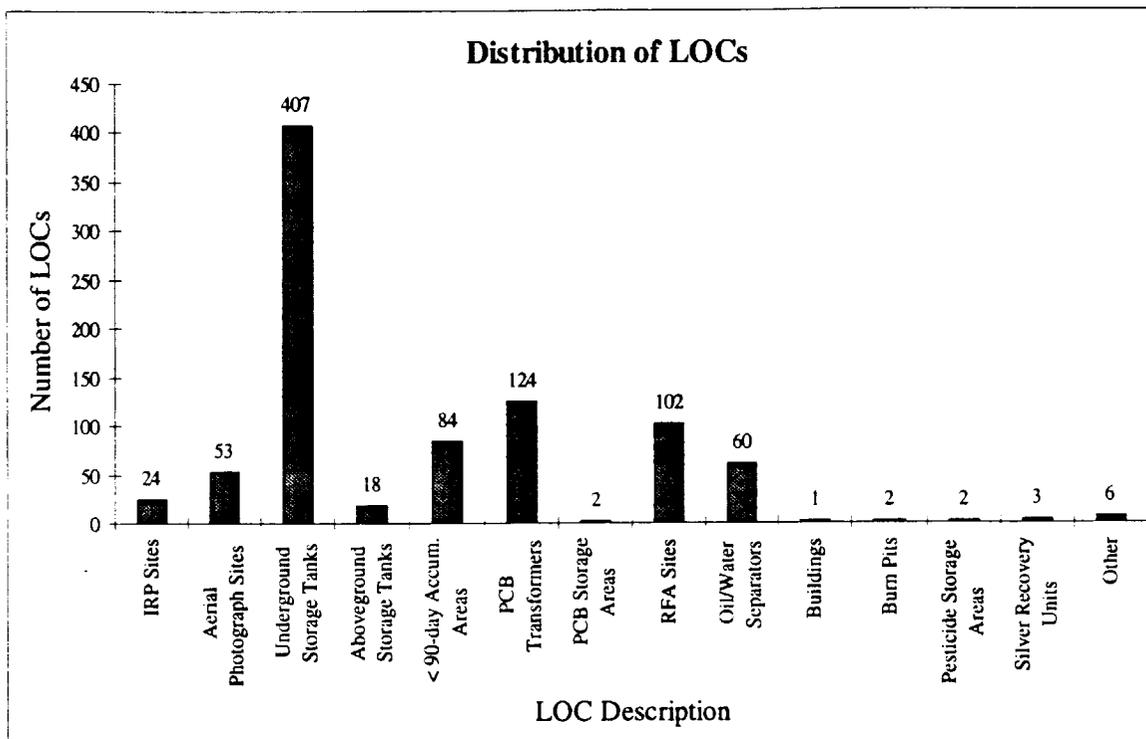
STATUS OF ENVIRONMENTAL RESTORATION PROGRAM

A total of 888 locations of concern (LOCs) has been identified at MCAS El Toro. An LOC is defined as any identified location or area that is potentially contaminated or is a potential source of contamination. Exhibit ES-1 summarizes the types and number of different LOCs at the Station.

Environmental Program Highlights. The following accomplishments highlight the progress of environmental restoration activities at MCAS El Toro:

- initiation of two time-critical removal actions at Sites 2 and 17, and one non-time-critical removal action at Site 19;
- agency approval of the draft final Remedial Investigation (RI) reports for operable unit (OU)-2A, -2B, and -2C, and the approval of the draft OU-2A feasibility study (FS) for the vadose zone;
- continuing operation of a soil vapor extraction (SVE) unit at Tank Farm 2 that has removed 35,000 pounds of petroleum product to date;
- removal of 8,000 gallons (to date) of free-phase petroleum product from the water table at underground storage tank (UST) 398;
- regulatory closure of 178 USTs to date (150 during 1996), including complete closure of Tank Farms 1, 3, and 4;

Exhibit ES-1



Source: Table 3-1a

- continuation of groundwater monitoring, with two sampling rounds completed in 1996;
- SVE pilot testing at 22 Site 24 wells which is effectively removing contamination; on-site investigation-derived waste treatment plant that reduces disposal costs and provides irrigation water for the Station;
- agency approval of the polynuclear aromatic hydrocarbon (PAH) Reference Study (BNI 1996a) that allowed the recategorization of 448 acres of land from area type 7 to area type 3, thus potentially allowing this land to be transferred by deed; and
- continued progress on an agreement between Orange County Water District and MCAS El Toro in support of a multipurpose project to clean up OU-1.

Installation Restoration Program. Currently, a total of 24 sites are being investigated in the Installation Restoration Program (IRP) at the Station (Sites 1 through 22, 24, and 25). Of these, 22 sites were evaluated during the Phase I RI, which was completed in May 1993. Two additional sites were established for investigation in Phase II, bringing the total number of IRP sites to 24. The final Work Plan for the Phase II RI/FS was prepared in July 1995, and these sites are in various stages of the RI/FS process. These 24 sites have been grouped into three OUs: OU-1,

information from the United States and California Environmental Protection Agencies (U.S. EPA and Cal-EPA) and DoD will be reviewed as part of the evaluations performed in selecting technologies.

Immediate Removal Actions. A UST Tiger Team has been formed at the Station to address compliance and closure issues related to USTs on-Station. In 1996, 150 USTs received regulatory closure, bringing the total number of closed USTs to 178. All of Tank Farms 1, 3, and 4 have been closed. Eighty-one inactive tanks are scheduled for removal in 1997. All 61 currently active tanks and the remaining 14 inactive tanks are scheduled to be removed upon base closure in 1999. The Tiger Team will continue to develop strategies for the removal of the remaining USTs as the Station closure approaches in 1999.

Two time-critical removal action memoranda were submitted for public review in October 1996 for IRP Sites 2 and 17 (landfills), for public safety and to abate erosion of landfill materials. A non-time-critical action memorandum was also submitted for public review in October 1996 for IRP Site 19 (Unit 2). These removal actions are designed to remove the risk to human health and the environment and expedite cost-effective cleanup.

Clean Properties. A basewide EBS for MCAS El Toro was submitted to the United States Environmental Protection Agency (U.S. EPA) and California Environmental Protection Agency (Cal-EPA) on 01 April 1995. The Navy, Marine Corps, and regulators have concurred on the designation of area type 1 parcels as CERFA eligible. The EBS designated approximately 2,982 acres of land as CERFA-eligible. Review of information available since April 1995 indicates that approximately 3,209 acres of land is currently CERFA-eligible. Since uncontaminated areas do not coincide with the zone designations based on current land use, the BCT and the LRA will need to determine how to transfer these properties expeditiously. Options include subdividing the existing zones based on area type.

Overlapping Phases. As an ongoing effort, the BCT will continue to identify phases of the cleanup process that can be overlapped to reduce the time required for completion. Areas of overlap at MCAS El Toro include the following:

- the RFA was conducted concurrently with the Phase I RI;
- treatability studies are being conducted concurrently with the early stages of the OU-2 RI;
- Phase II RI/FS activities for the volatile organic compound (VOC) source area, landfills, and OU-3 sites were conducted simultaneously;
- a Comprehensive Long-Term Environmental Action Navy (CLEAN)/remedial action contract (RAC) contractor integration during the pilot testing at Site 24, and planned integration during future pilot tests; and
- cooperative facilities for conducting RCRA, UST, and RI/FS activities are being used.

Contracting Procedures. A RAC was executed with OHM Remediation Services Corporation to conduct response actions on installations within the purview of Southwest Division Naval Facilities Engineering Command (SWDIV). SWDIV management of the CLEAN, RAC, and indefinite-quantity contracts has been based on a cooperative and interactive approach. Active participation by all members of the Project Team results in a bias for action.

Community Reuse Interface. In an effort to carry out strategies for environmental restoration activities, while assuring proactive community involvement, the Station has adopted an approach to meet the needs of the public as well as the requirements of NEPA, CERCLA, CERFA, and the California Health and Safety Code Section 25356.1. The approach provides for a number of services to inform interested parties (e.g., the city of Irvine, the city of Lake Forest, and Orange County) of environmental restoration activities while maintaining a commitment for efficient and cost-effective cleanup at MCAS El Toro.

Bias for Cleanup. The BCT will continue to emphasize expedited remedial actions and attempt to avoid lengthy site characterization studies and prolonged RI/FS activities. As such, the BCT members will continue to collaborate in devising work plans, identifying cleanup criteria, and selecting remedial actions in an effort to aggressively pursue cleanup instead of studies and data collection. To date, the BCT has successfully expedited environmental restoration by initiating removal actions under the Superfund Accelerated Cleanup Model at three IRP sites.

Validation of Technology: The BCT and BRAC Project Team have been formed to include technical, operational, reuse, and administrative specialists who provide input and support for efforts to achieve accelerated cleanup and transfer of Station property. Some of the project team members include representatives from the following:

- U.S. EPA, Cal-EPA, and other local regulatory agencies (e.g., Orange County Health Care Agency);
- SWDIV;
- MCAS El Toro BRAC Department;
- MCAS El Toro Environmental Department;
- MCAS El Toro Installations Department;
- CLEAN I and CLEAN II contractors; and
- RAC contractor.

The effectiveness of immunoassay field screening kits was validated in the PAH Reference Study (BNI 1996a). The use of these kits allowed for quick, accurate analysis of on-site contaminants during RI field activities.

Presumptive Remedies. Presumptive remedies are preferred technologies for common categories of sites, based on previous remedy selection and U.S. EPA scientific and engineering evaluation of performance data on technology implementation. The presumptive remedy approach is one tool used to accelerate

cleanup under the Superfund Accelerated Cleanup Model. By using presumptive remedies, site investigations and selection of cleanup strategies can be streamlined. Presumptive remedies are expected to assure consistency in remedy selection and reduce time and cost required to clean up similar types of sites. Currently, presumptive remedies are recognized by U.S. EPA for VOC remedies and municipal and military landfill remedies. Presumptive remedies are being considered for the four landfill sites (Sites 2, 3, 5, and 17) and the VOC source area (Site 24).

Partnering: A partnering agreement among the Project Team is essential for efficient management of the base closure process. The BCT has established a partnering agreement and team charter that incorporates the latest and most efficient management techniques to coordinate installation restoration activities.

The following team charter agreement for MCAS El Toro was developed during a team-building seminar held in October 1994.

We, the MCAS El Toro partners, commit to effectively working together to maximize restoration and reuse of MCAS El Toro by 1999. We will accomplish this goal through teamwork, dedicated and focused participation, our ethics outlined below, and effective communication between all partners.

We want the project to be enjoyable to work on and will work together with trust and respect, and will ensure that all team members' interests impact decisions. Problems will be resolved quickly or escalated if appropriate by team members closest to the issue. As partners, we commit to communicating our mission and partnership goals to new project members and encourage them to embrace this partnership.

Involvement of the regulatory agencies during pre-proposal meetings for new work to gain concurrence from the entire BCT at the earliest possible phases of investigation and cleanup.

Our mutually agreed upon ethical standards are listed below.

CODE OF ETHICS

- Integrity
- Trust
- Leadership
- Sincerity
- Empathy
- Responsibility
- Objectivity
- Dependability
- Accountability
- Credibility
- Candor
- Honesty

Additionally, we will listen to and value others' opinions, honor diversity, model the behavior we expect from others, and have fun.

Through frequent meetings and conference calls, the BCT has worked together as a team to discuss and resolve issues related to environmental restoration activities at MCAS El Toro with a focus on expediting reuse while protecting human health and the environment. One manifestation of this partnering is involvement of the regulatory agencies during preproposal meetings for new environmental work in order to gain concurrence from the entire BCT at the earliest possible phases of investigation and cleanup.

SUMMARY OF CURRENT BCP ACTION ITEMS

Table ES-1 provides a list of recommendations and issues associated with the environmental restoration and compliance that require further evaluation and action by the BCT. The list covers key items identified during the course of the BCP preparation and includes the BCT activities relating to the base closure.

The BCT has coordinated and managed a number of tasks relating to the BRAC cleanup activities at MCAS El Toro during the past year. A brief list of accomplishments includes:

- continuing progress by the UST Tiger Team to address UST compliance and closure issues;
- acceleration of an expedited UST removal program for the removal of 81 of the remaining 95 inactive USTs in 1997;
- reduction in the number of IRP sites investigated under CERCLA via the CERCLA petroleum exclusion;
- continued Restoration Advisory Board meetings during 1997; and
- publication of fact sheets for public information and awareness.

**Table ES-1
BCT/Project Team Action Items
(Sheet 1 of 3)**

Action Items	STATUS		
	In Progress	To Be Performed	Completed
COMPLIANCE ACTIVITIES			
UST Removal/Compliance			
Install UST monitoring systems	X		
Remove 81 of 95 remaining inactive USTs in 1997	X		
Obtain regulatory closure on removed USTs	X		
RCRA Facilities			
Implement closure strategies for 73 temporary accumulation areas		X	
OWSs			
Remove inactive OWSs		X	
Evaluate active OWSs for removal after 1999		X	
PCBs			
Evaluate past PCB transformer storage areas	X		
Perform survey of and inventory all transformers on station to evaluate potential PCB content	X		
Hazardous Waste Management			
Maintain current compliance program	X		
Wastewater Discharges			
Maintain compliance with NPDES Permit	X		
Air Emissions			
Maintain current compliance program	X		
Comply with air regulations when implementing remedial actions		X	
Lead-Based Paint			
Maintain current compliance program	X		

**Table ES-1
BCT/Project Team Action Items
(Sheet 2 of 3)**

Action Items	STATUS		
	In Progress	To Be Performed	Completed
Asbestos			
Conduct survey of housing facilities			X
Perform abatement as needed.	X		
Cleanup Standards			
Develop cleanup standards for various media	X		
Conceptual Models			
Update conceptual site models	X		
Risk Assessments			
Update risk assessment	X		
Early Action Items			
Identify opportunities	X		
Implement opportunities <ul style="list-style-type: none"> - One non-time-critical removal action memorandum and two time-critical removal action memoranda are in public review. - To date, portions of three sites have been eliminated from the RI/FS process through the petroleum exclusion process. - To date, one unit of one site has been eliminated from the RI/FS process with a no further investigation decision. 	X		
CERCLA 120(h)(3) CONSIDERATIONS			
Develop an inventory of sites recommended for no further action	X		
Evaluate identified features of potential environmental concern through BCT site walks (e.g., aerial photograph sites, Desert Storm hazardous waste storage area, pesticide storage areas, PCB storage areas, former silver recovery units, and possible mercury leaks)		X	
COMMUNITY RELATIONS			
Update the community relations plan as required			X
Maintain and update the mailing list	X		
Maintain the information in the repository	X		
Update the administrative record quarterly	X		
Publish updated fact sheets	X		
Publish public notices as needed	X		

3.1.2.2 Features of Potential Environmental Concern Identified in Personnel Interviews

Interviews with current and former MCAS El Toro personnel were conducted on 26 May 1994. The interviewers included Station personnel, staff from SWDIV, the CLEAN I contractor, Cal-EPA representatives, and the U.S. EPA consultant. The purpose of these interviews was to obtain additional information regarding past hazardous substance management practices, activities, and releases at the Station. As a result of the interviews, the following two additional features of potential environmental concern were identified.

- A former landfill area was identified near Station family housing. During grading activities for housing construction in the early 1980s, the area located between Building 722, Connor Avenue, and Chosen Drive was filled with general construction refuse to stop water from collecting. Hazardous wastes are not known to have been disposed in this fill area. Additional evaluation of this area will be performed by the BCT in 1997.
- An additional landfill area identified south of Perimeter Road was found to coincide with IRP Site 5, the Perimeter Road Landfill. IRP Site 5 was investigated under OU-2C.

These locations of potential environmental concern are shown in Figure 3-1.

During preparation of the draft EBS Report, a former Station employee reported that mercury leaks occurred at the two elevated water towers formerly located in the northwest portion of the Station. The former locations of these towers are shown in Figure 3-1. The towers had mercury water-level gauges near the ground surface. According to the former Station employee, these gauges leaked small quantities of mercury onto the unpaved ground surface at the base of the towers. These towers were constructed in 1943 (Building 222, east tower) and 1953 (Building 373, west tower); they were demolished in 1992. The BCT will evaluate these locations in 1997.

3.2 COMPLIANCE PROGRAM STATUS

The following sections provide a summary of the status of compliance programs at MCAS El Toro. The status of mission/operational-related compliance program activities is summarized in Table 3-4 (Mission/Operational-Related Compliance Projects). Closure-related compliance projects and early actions related to compliance are summarized in Tables 3-5 (Closure-Related Compliance Projects) and 3-6 (Compliance Early Action Status), respectively.

3.2.1 Storage Tanks

Storage tanks, including USTs and ASTs, are addressed in the following sections. Also included is a discussion of the fuel distribution systems (fuel pipelines) at the Station.

3.2.1.1 Underground Storage Tanks

There are a total of 407 USTs at MCAS El Toro. This total includes 61 active, 95 inactive, 249 removed, and 2 abandoned tanks. Of the removed and abandoned tanks, the

Station has received letters confirming regulatory closure on 178 of them, including all of Tank Farms 1, 3, and 4. These totals are continuously modified to reflect the most current information. The overall total of 407 tanks differs slightly from previous BCPs. The changes reflect deletions from the list as Station staff discover duplicate listings or “phantom tanks” that never existed but were added to the tank list in error. Likewise, the list reflects additions of previously undocumented tanks discovered during the course of the site assessment or closure activities. Memoranda documenting each change to the overall tank list are maintained by the Environmental Engineering Division at the Station.

A comprehensive inventory of MCAS El Toro USTs is provided in Table 3-7 (Underground Storage Tank Inventory). This table includes available information on tank characteristics, compliance actions, known releases, current status, and future actions. Exhibit 3-2 shows a summary of the status of USTs at MCAS El Toro.

The UST locations are plotted in a series of figures. Figure 3-2a (Key to UST Location Maps) describes the sections of the Station encompassed by four area-specific maps. Figure 3-2b shows the northwest quadrant of the Station; Figure 3-2c shows the northeast quadrant of the Station; Figure 3-2d shows the southeast quadrant of the Station; and Figure 3-2e shows the southwest quadrant of the Station. These area-specific maps include all known UST locations at the Station with the exception of those noted in Table 3-7. The plotted UST locations are based on available information, including Station maps, UST surveys, UST removal drawings, RFA site visits, and interviews with Station personnel. Information on the locations for some of the USTs was unavailable. In these cases, the UST location maps show the UST in the center of the nearest building. Figures 3-2b through 3-2e indicate the status of each UST plotted as either active, inactive, removed, closed, or abandoned in place. Each figure also provides a list of the USTs that appear in that figure.

Compliance issues for USTs are managed by the MCAS El Toro Environmental Office (EO). Maintenance activities for USTs are the responsibility of the Station Assistant Chief of Staff (AC/S) Installations Department. Operational responsibilities are split among Station organizations and tenants. Information on USTs was obtained from the Station UST Inventory Database. These data were supplemented with information obtained from the RFA performed at the Station and other UST reports prepared for the Station.

The Orange County Health Care Agency (OCHCA), Environmental Health Division regulates USTs within the County and is the lead agency for UST compliance for the Station. However, if a UST leaks and causes significant contamination, the RWQCB oversees cleanup and issues closure.

The Station has a current tank-and-pipeline integrity testing and monitoring system certification contract. There are five USTs on-Station at Tank Farm 555 (547, 548, 549, 550, and 551) for which current monitoring technologies do not exist. These 567,000-gallon tanks store JP-5 fuel.

**Table 3-5
Closure-Related Compliance Projects
(Sheet 1 of 1)**

Project	Status	Regulatory Program
Removal of remaining inactive USTs. 249 USTs removed to date, 178 sites closed, including all of Tank Farms 1, 3, and 4.	Removal began in 1996. Work is currently being performed under CLEAN II.	California UST Regulations OCHCA and RWQCB, Santa Ana
Free-product removal at Tank 398	Construction of the free-product removal system has been completed. System is in operation.	California UST Regulations OCHCA and RWQCB, Santa Ana
Soil vapor extraction at Tank Farm 2	35,000 pounds of petroleum product removed to date.	California UST Regulations OCHCA and RWQCB, Santa Ana
Closure of RCRA storage facility (Building 673-T3)	The facility was closed in November 1995. Site remediated and sampled. Closure letter from DTSC dated 08 March 1996.	RCRA
Follow-up sampling at RFA SWMUs/AOCs recommended for further action	13 SWMUs/AOCs and one TAA were addressed in the final RFA addendum (May 1996).	RCRA
Evaluation of the less-than-90-day accumulation areas (TAAs)	73 TAAs on-Station are being evaluated for removal and/or decontamination strategies.	RCRA
Removal, remediation and closure activities of inactive ASTs, OWSs and TAAs	Removals will begin in 1997 under the Remedial Action Contract, DO # 70.	Various

Abbreviations: UST – underground storage tank
 OCHCA – Orange County Health Care Agency
 CLEAN – Comprehensive Long-Term Environmental Action Navy
 RWQCB – Regional Water Quality Control Board
 RCRA – Resource Conservation and Recovery Act
 RFA – RCRA Facility Assessment
 SWMU/AOC – solid waste management unit/area of concern
 TAA – temporary accumulation area
 OWS – oil/water separator

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