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FINAL
RECORD OF DECISION
OPERABLE UNIT 3B
NO ACTION SITES 7 AND 14
MARINE CORPS AIR STATION
EL TORO, CALIFORNIA

JUNE 2001

FINAL
RECORD OF DECISION
OPERABLE UNIT 3B
NO ACTION SITES 7 AND 14
MARINE CORPS AIR STATION
EL TORO, CALIFORNIA

JUNE 2001

DECLARATION

DECLARATION

SITE NAME AND LOCATION

Marine Corps Air Station El Toro
Operable Unit 3B Sites 7 and 14
Orange County, California

National Superfund Database Identification Number: CA 6170023208

STATEMENT OF BASIS AND PURPOSE

This decision document presents the selected remedial action for Sites 7 and 14 at Marine Corps Air Station El Toro in Orange County, California. The document was developed in accordance with the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), as amended by the Superfund Amendments and Reauthorization Act of 1986 and the National Oil and Hazardous Substances Pollution Contingency Plan. This decision is based on the administrative record file for these sites.

The state of California (through the California Environmental Protection Agency, Department of Toxic Substances Control, and Santa Ana Regional Water Quality Control Board) and the United States Environmental Protection Agency concur with the selected remedy.

DESCRIPTION OF THE SELECTED REMEDY: NO ACTION

The selected remedy for Sites 7 and 14 is no action. In selecting the no action remedy for these sites, the MCAS El Toro Base Realignment and Closure Cleanup Team, made up of representatives of the Marine Corps/Navy, United States Environmental Protection Agency, Department of Toxic Substances Control, and the Santa Ana Regional Water Quality Control Board, has determined that the existing condition of the sites is protective of human health and the environment.

Although shallow groundwater underlying these sites is contaminated by volatile organic compounds, including trichloroethene, carbon tetrachloride, and tetrachloroethene at Site 7 and trichloroethene and carbon tetrachloride at Site 14, remedial investigations have shown that the contamination present in groundwater does not originate from Sites 7 or 14 but lies within the Site 24, Volatile Organic Compound Source Area groundwater plume. Groundwater cleanup, including use restrictions that prohibit drilling of wells and/or extraction of groundwater and allow access for groundwater monitoring and maintenance of equipment associated with groundwater remediation, will be addressed in the Proposed Plan and Record of Decision for Sites 18 and 24.

DECLARATION STATEMENT

On the basis of extensive field investigations, laboratory analyses, and a thorough assessment of potential human-health risks at each location, the Base Realignment and Closure Cleanup Team has determined that no remedial action is necessary to assure the protection of human health and the environment at Sites 7 and 14. The remedial

investigation of these sites showed that site-related contamination is limited to the shallow soil interval (0 to 10 feet below ground surface). The human-health risk assessments show that the contaminants present in soil do not present an unacceptable risk to human health or the environment. Therefore, no remedial action is required at these sites. Since hazardous substances are not present at concentrations above unacceptable levels, CERCLA Section 121 cleanup standards do not apply.

Signature: _____ Date:_____

Mr. Dean Gould
Base Closure and Realignment Environmental Coordinator
Marine Corps Air Station El Toro

Signature: _____ Date:_____

Mr. John E. Scandura, Chief
Southern California Operations
Office of Military Facilities
Department of Toxic Substances Control

Signature: _____ Date:_____

Mr. Daniel A. Meer, Chief
Federal Facilities Cleanup Branch
United States Environmental Protection Agency, Region 9

Signature: _____ Date:_____

Mr. Gerald J. Thiebeault
Executive Officer
Regional Water Quality Control Board, Santa Ana Region

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Mr. Dean Gould
Base Closure and Realignment Environmental Coordinator
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ACRONYMS/ABBREVIATIONS

AOC	area of concern
ARAR	applicable or relevant and appropriate requirement
BCT	BRAC Cleanup Team
bgs	below ground surface
BNI	Bechtel National, Inc.
BRAC	base realignment and closure
Cal-EPA	California Environmental Protection Agency
CA LUFT/SW	California Leaking Underground Fuel Tank/Solid Waste
CDM	CDM Federal Programs Corporation
CDMG	California Division of Mines and Geology
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act of 1980
COC	chemical of concern
COPC	chemical of potential concern
CSF	cancer slope factor
DDD	dichlorodiphenyldichloroethane
DDE	dichlorodiphenyldichloroethene
DDT	dichlorodiphenyltrichloroethane
DON	United States Department of the Navy
DQO	data quality objective
DTSC	(Cal-EPA) Department of Toxic Substances Control
EPC	exposure-point concentration
FFA	Federal Facilities Agreement
FS	feasibility study
HHRA	human-health risk assessment
HI	hazard index
HQ	hazard quotient
IAS	initial assessment study
IRP	Installation Restoration Program
JEG	Jacobs Engineering Group, Inc.
JMM	James M. Montgomery Engineers, Inc.
JP-5	jet propellant grade 5

µg/dL	micrograms per deciliter
µg/kg	micrograms per kilogram
MCAS	Marine Corps Air Station
MCL	maximum contaminant level
mg/kg	milligrams per kilogram
MSL	mean sea level
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
NPL	National Priorities List
OCWD	Orange County Water District
OU	operable unit
PAH	polynuclear aromatic hydrocarbon
PCB	polychlorinated biphenyl
PCE	tetrachloroethene
PRG	preliminary remediation goal
RAB	Restoration Advisory Board
RCRA	Resource Conservation and Recovery Act
RFA	RCRA facility assessment
RfD	reference dose
RI	remedial investigation
ROD	record of decision
RWQCB	(California) Regional Water Quality Control Board
SAIC	Science Applications International Corporation
SIPOA	Site Inspection Plan of Action
SCAQMD	South Coast Air Quality Management District
SVE	soil vapor extraction
SVOC	semivolatile organic compound
SWDIV	Southwest Division Naval Facilities Engineering Command
SWMU	solid waste management unit
TAL	target analyte list
TCE	trichloroethene
TPH	total petroleum hydrocarbons
TRPH	total recoverable petroleum hydrocarbons
UCL	upper confidence limit
U.S. EPA	United States Environmental Protection Agency
VOC	volatile organic compound

DECISION SUMMARY

Section 1
SITE NAME, LOCATION, AND DESCRIPTION

1.1 SITE NAME

The two sites addressed in this decision document are contained in Operable Unit (OU)-3B at Marine Corps Air Station (MCAS) El Toro. The Installation Restoration Program (IRP) site numbers and names are:

- Site 7, Tank Drop Drainage Area No. 2, and
- Site 14, Battery Acid Disposal Area.

The National Superfund Database Identification Number for this facility is CA 6170023208.

1.2 SITE LOCATION

MCAS El Toro is located in southern California, approximately 8 miles southeast of the city of Santa Ana and 12 miles northeast of the city of Laguna Beach (Figure 1-1). Sites 7 and 14 are located in the western portion of the Station as shown in Figure 1-1.

1.3 LEAD AND SUPPORT AGENCIES

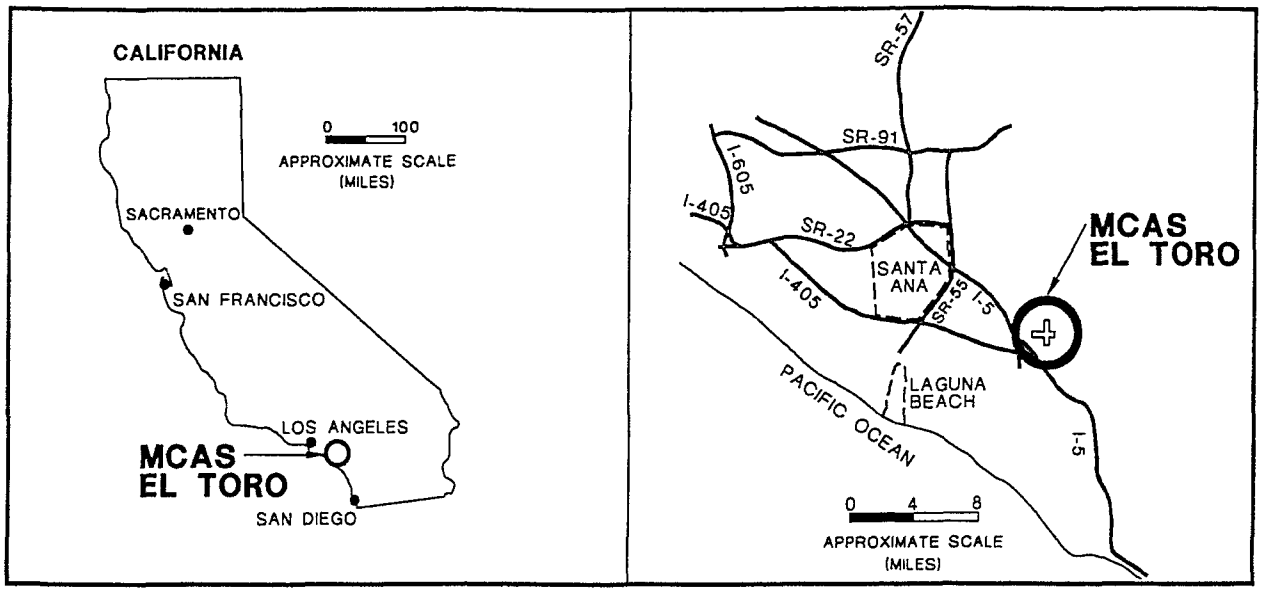
MCAS El Toro is a federal facility. The lead agency for remedial investigation and remedial action at this facility is the United States Department of the Navy (DON). Regulatory agencies providing support and oversight include the United States Environmental Protection Agency (U.S. EPA), the California Environmental Protection Agency (Cal-EPA) Department of Toxic Substances Control (DTSC), and the Santa Ana Regional Water Quality Control Board (RWQCB).

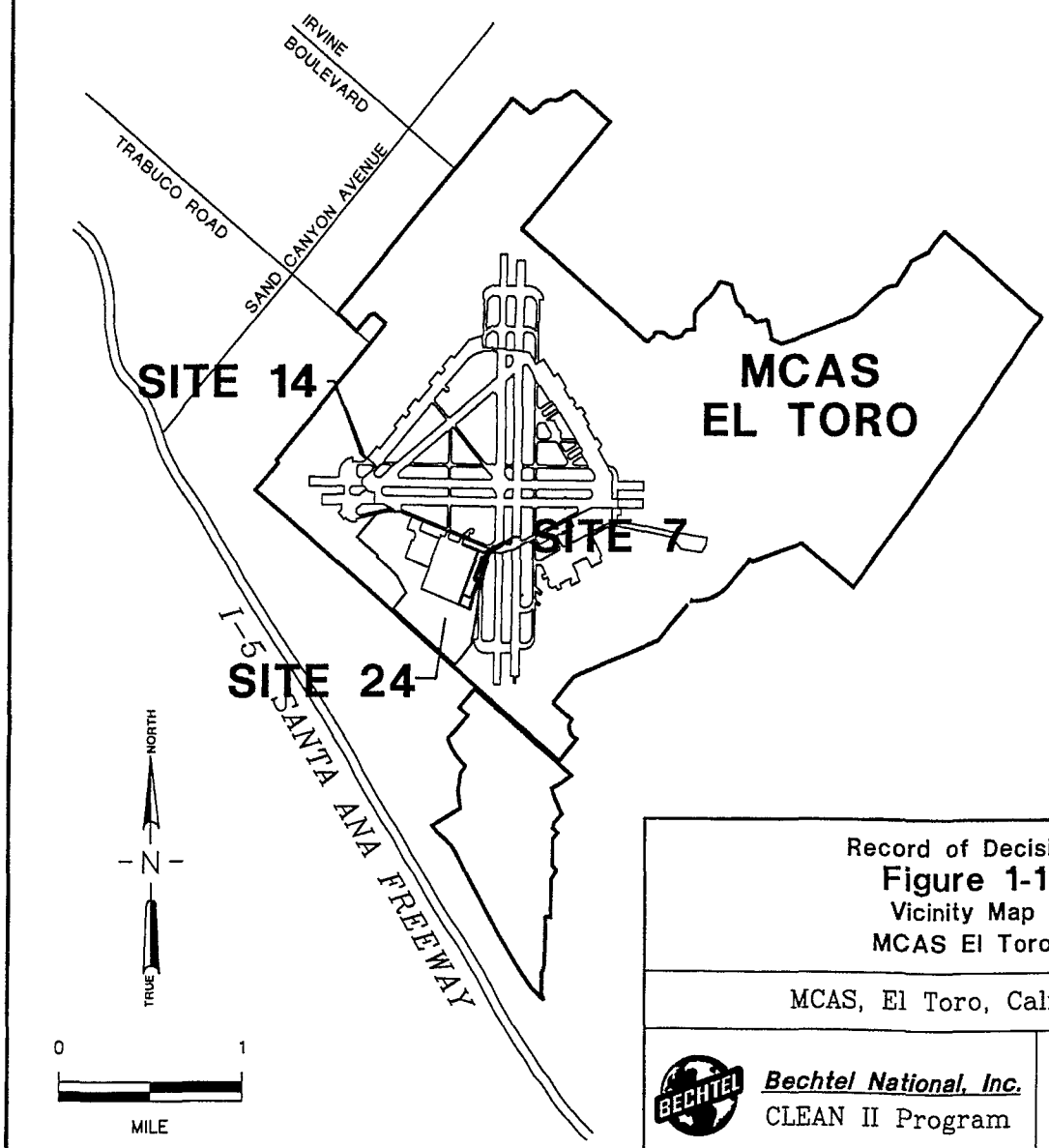
1.4 SITE DESCRIPTION

MCAS El Toro was commissioned in 1943 as a Marine Corps pilot fleet-operation training facility. In 1950, the Station was selected for development as a master jet station and permanent center for Marine Corps aviation on the west coast. The Station mission has involved the operation and maintenance of military aircraft and ground-support equipment. Historical activities on the Station included aircraft maintenance and repair.

To support the installation's mission, facility operations were expanded over the years to include runways, aircraft maintenance and training facilities, housing, shopping facilities, and other support facilities. MCAS El Toro occupies 4,738 acres of land, including 580 acres that are leased for commercial farming (DON 1998). The adjacent/surrounding land uses around MCAS El Toro include residential, commercial, industrial, and recreational.

MCAS El Toro ceased operation 02 July 1999. The Marine Corps' mission at the Station was incorporated primarily into MCAS Miramar operations in San Diego, California.





Record of Decision
Figure 1-1
Vicinity Map
MCAS El Toro

MCAS, El Toro, California

Bechtel National, Inc.
CLEAN II Program

Date: 7/26/00
File No: 164R5742
Job No: 22214-164
Rev No: B

Section 2
SITE HISTORY AND ENFORCEMENT ACTIVITIES

MCAS El Toro was commissioned in 1943 as a Marine Corps pilot fleet operation training facility. In 1950, the Station was selected for development as a master jet station and permanent center for Marine Corps aviation on the West Coast. The Station mission has involved the operation and maintenance of military aircraft and ground-support equipment. These activities generated oils, solvents, paint residues, hydraulic fluid, used batteries, and other wastes (MCAS El Toro 1991). Wastes were sprayed on the ground for dust suppression, placed in unlined on-Station landfills, disposed directly on the ground, and burned or covered with soil.

The IRP was developed in 1980 by the United States Department of Defense to comply with federal guidelines to manage and control past hazardous waste disposal actions (DON 1997). Environmental remediation activities at MCAS El Toro are performed under the IRP. The first indication of contamination at the Station occurred during routine water-quality monitoring in 1985, when the Orange County Water District discovered trichloroethene (TCE) in groundwater at an irrigation well located approximately 3,000 feet downgradient of MCAS El Toro.

In 1985, the DON began to work on an Initial Assessment Study (IAS) to locate potentially contaminated sites on the Station. This work was conducted for the Naval Facilities Engineering Command under the Navy Assessment and Control of Installation Pollutants Program, which was the DON version of the Department of Defense IRP at that time. The IAS Report identified 17 sites as potential sources of contamination (Brown and Caldwell 1986). The identification of potentially contaminated sites was based on the results of record searches and employee interviews. The report recommended sampling locations and sample analytical parameters to confirm the suspected contamination at the sites.

In 1987, the Marine Corps contracted for a review of the IAS Report to produce a Site Inspection Plan of Action (SIPOA) (JMM 1988). In July 1987, while the SIPOA study was underway, RWQCB Santa Ana Region issued a cleanup and abatement order to the Marine Corps. This order required the Station to initiate a perimeter groundwater volatile organic compound (VOC) investigation and submit a draft report. The SIPOA Report released in August 1988 included a recommendation of 19 sites for study and amended the site sampling plans proposed in the IAS Report. This SIPOA Report served as the basis for the Sampling and Analysis Plan for the remedial investigation (RI)/feasibility study (FS) sites.

In June 1988, the U.S. EPA recommended adding MCAS El Toro to the National Priorities List (NPL) of the Superfund Program because of VOC groundwater contamination at the Station boundary and in the agricultural wells west of the Station. MCAS El Toro was added to the NPL on 15 February 1990. In October 1990, the Marine Corps/DON signed a Federal Facilities Agreement (FFA) with U.S. EPA Region 9, California Department of Health Services (part of which is now the Cal-EPA DTSC, and the RWQCB Santa Ana Region (FFA 1990).

The FFA is a cooperative agreement that:

- assures environmental impacts are investigated and appropriate response actions are taken to protect human health and the environment;
- establishes a procedural framework and schedule for developing, implementing, and monitoring appropriate response actions;

- facilitates cooperation, exchange of information, and participation of the parties; and
- assures adequate assessment, prompt notification, and coordination between federal and state agencies.

The implementation of the FFA is included as one of the responsibilities of the Base Realignment and Closure (BRAC) Cleanup Team (BCT). The BCT consists of representatives from the DON Southwest Division Naval Facilities Engineering Command (SWDIV), U.S. EPA, DTSC, and RWQCB Santa Ana Region. The team was established to manage and coordinate environmental restoration and compliance programs related to the operational closure of MCAS El Toro by July 1999.

The vision of the BCT is to expedite restoration and reuse of MCAS El Toro. The BCT's mission is fast-track remediation of MCAS El Toro, to promote reuse and protect human health and the environment, by working cooperatively with the BCT, the community, and the stakeholders.

In December 1989, the DON began to prepare a Phase I RI Work Plan and associated documents for MCAS El Toro. The DON reviewed the available reports and other documents pertinent to past disposal practices at the Station and concluded that 22 IRP sites would be investigated (JEG 1993a). These sites were grouped into three OUs. OU-1 comprised the regional VOC groundwater investigation (Site 18), which was conducted both on and off the Station. OU-2 included the four landfill sites (Sites 2, 3, 5, and 17) and Site 10, the Petroleum Disposal Area (later moved to OU-3). The remaining 16 sites (Sites 1, 4, 6, 7, 8, 9, 11, 12, 13, 14, 15, 16, 19, 20, 21, and 22) were grouped together as OU-3. These sites were considered to be potential sources for a variety of contaminants. The principal objectives of the Phase I RI were to evaluate the source(s) of contamination in regional groundwater west of the Station and determine whether contamination exists and is affecting the environment at sites in OU-2 and OU-3.

The results of the Phase I RI were documented in a draft Technical Memorandum issued in July 1993 (JEG 1993a), a draft RI Report for OU-1 issued in July 1994 (JEG 1994a), a final Soil Gas Survey Technical Memorandum issued in October 1994 (JEG 1994b) and a draft final interim RI/FS Report for OU-1 issued in August 1996 (JEG 1996). A variety of contaminants in the groundwater, soil, surface water, and sediment at MCAS El Toro were identified during the Phase I RI. Contaminants in the soil and sediment consisted primarily of low concentrations of semivolatile organic compounds (SVOCs), petroleum hydrocarbons, pesticides, herbicides, and polychlorinated biphenyls (PCBs) (JEG 1993a). It was also concluded during the Phase I RI that the source of contamination for regional groundwater is in the southwest quadrant of the Station, but no specific source was identified. (It was later determined during the Phase II RI that Site 24 is the source of the regional groundwater contamination.) The sampling events yielded sufficient information to warrant conducting a preliminary risk assessment of contaminants at the sites for both groundwater and soil contamination. The results of the Phase I RI provided the primary data for the Phase II RI/FS.

In March 1993, MCAS El Toro was placed on the BRAC III list of military facilities considered for closure. Under the terms of the FFA, Station closure would not affect the DON's obligation to conduct the RI/FS and to comply with the other requirements of the FFA (FFA 1990).

Concurrent with the Phase I RI, the DON conducted a Resource Conservation and Recovery Act (RCRA) facility assessment (RFA) at MCAS El Toro. The purpose of the RFA was to evaluate whether an additional 140 sites at MCAS El Toro would require further investigation under the Phase II RI/FS Program. The final RFA Report was submitted in July 1993 (JEG 1993b). Based on an evaluation of the sampling results, 25 solid waste management units (SWMUs)/areas of concern (AOCs) were recommended for further action. Site 23 (Wastewater Treatment Plant Sewer Lines) was evaluated in the RFA and was recommended for no further action.

Interviews with active and retired personnel from the Fuel Operations Division and Facility Management Department were held in 1994 at MCAS El Toro (JEG 1994c). The objectives of the meeting were to confirm and supplement information obtained from past interviews and field investigations, to obtain a better understanding of current and historical operations at MCAS El Toro, and to identify new areas of potential environmental concern at MCAS El Toro. Those interviewed had knowledge of operations and procedures for storage and disposal of hazardous materials and waste. The interview panel consisted of regulatory agency personnel, DON and MCAS El Toro personnel, and contractor personnel.

The subjects covered during the interviews included underground storage tanks, aboveground storage tanks, IRP sites, tank farms, disposal procedures, disposal areas, and accidental or unintentional spills or leaks that may have occurred. Much of the information gathered from previous interviews and field investigations was confirmed. The interview panel discussed the types of wastes known to be deposited in each of the Station landfills, the depth and the boundaries of the landfills, and how the wastes were handled. Other subjects discussed included the types of operations that occurred on the Station and the types of chemicals used in these operations.

In July 1995, a final Work Plan for the Phase II RI/FS was issued (BNI 1995a). This Work Plan presented an approach to conduct the Phase II RI at 24 IRP sites including 2 new sites, Sites 24 and 25. The objectives of the plan were to present a data quality objective-based sampling strategy to establish confidence that inferences made from the data were correct and, ultimately, to collect sufficient information to support risk management decisions.

For the purposes of the Phase II RI, the OU-3 sites were divided into OU-3A (Sites 4, 6, 8, 9, 10, 11, 12, 13, 15, 19, 20, 21, and 22) and OU-3B (Sites 1, 7, 14, and 16). The Phase II RI for the OU-3A sites and Site 16 was conducted in 1995 through 1997. The Phase II RI for OU-3B Sites 7 and 14 was conducted in 1999. During this same period, the DON performed an evaluation of background concentrations of metals in soils and reference levels for pesticides and herbicides in soils (BNI 1996a). This enabled site-specific analytical results of soil sampling to be compared with background and reference levels during the RI to identify potential releases.

Subsequent to the Phase II RI, an evaluation of metals in groundwater was performed (BNI 1999a). The purpose of this evaluation was to determine whether the reported concentrations of metals in groundwater at MCAS El Toro reflect ambient conditions or are the result of historical Station activities.

From 1998 through 1999, the DON conducted a historical radiological assessment of MCAS El Toro (Roy F. Weston 2000). The assessment was performed as part of the base closure process for the release of the Station for reuse. A final historical radiological assessment report

summarizing the results of the assessment was issued in May 2000. The report recommended that a radiological survey be conducted at selected sites and buildings at MCAS El Toro. The survey is scheduled to begin in mid-2001.

Table 2-1 summarizes the enforcement activities and environmental investigations that have occurred at MCAS El Toro.

Table 2-1
Summary of Environmental Investigations at MCAS El Toro

Date	Investigation	Objective	Summary of Findings
1985	IAS	Locate potentially contaminated sites at MCAS El Toro using record searches and employee interviews.	Identified 17 sites as potential sources of contamination. Recommended sampling locations and sample analytical parameters to confirm the suspected contamination at the 17 sites.
1986	OCWD groundwater investigation	Investigate source of TCE found in agricultural well west of MCAS El Toro.	After installing a series of monitoring wells and soil vapor probes and reviewing independent investigations, OCWD concluded that MCAS El Toro was the source of TCE contamination detected in groundwater downgradient of the Station.
1988	Site inspection plan of action	Review IAS findings.	Recommended 19 sites for investigation, and amended the site sampling plans proposed in the IAS Report. This included one site (Site 18) intended to address the off-Station contaminant plume of VOCs.
1988	Perimeter study investigation	Address the RWQCB Santa Ana Region Cleanup and Abatement Order requiring investigation of the source of regional VOC groundwater contamination.	Detected the presence of VOCs in shallow groundwater near the southwestern boundary of the Station.
1989	Interim pump-and-treat system	Pump and treat VOC-contaminated groundwater from three extraction wells near the Station boundary.	Groundwater was extracted at a combined rate of 30 gallons per minute from three wells and treated with granular activated carbon. Extracted groundwater had concentrations of TCE and PCE from 10 to 160 and 25 to 100 parts per billion, respectively.
1989	Phase I RI Work Plan and associated documents for MCAS El Toro	Formulate Work Plan, Field Sampling Plan, and other RI documents to direct the Phase I fieldwork.	DON concluded that 22 sites would be investigated and grouped into three OUs.
1990	Superfund NPL	Identify sites with imminent risks to the public.	MCAS El Toro was added to the NPL for the Superfund Program because of VOC contamination at the Station boundary and in agricultural wells west of the Station boundary.

(table continues)

Table 2-1 (continued)

Date	Investigation	Objective	Summary of Findings
1993	Base Closure and Realignment Act	Identify sites for closure	MCAS El Toro was placed on the BRAC III list Under the terms of the FFA, Station closure would not affect the DON's obligation to conduct the RI/FS and comply with the other requirements of the FFA
1993	Phase I RI	The draft Technical Memorandum and draft OU-1 RI Reports document the results of the Phase I RI The principal objectives of the Phase I RI were to make an initial determination regarding the existence and risks of contamination at sites in OU-1, OU-2, and OU-3	Various contaminants in the groundwater, soil, surface water, and sediment were detected at MCAS El Toro Soil and sediment contaminants were primarily SVOCs, petroleum hydrocarbons, pesticides, herbicides, and PCBs The Phase I RI concluded that the source of contamination for regional groundwater was the southwest quadrant of the Station, but it did not indicate specific sources A preliminary risk assessment was conducted for contaminants at the sites in both groundwater and soil
1993	RCRA facility assessment	Evaluate whether an additional 140 sites at MCAS El Toro would require further investigation under the Phase II RI/FS Program	Based on the RCRA facility assessment results, 25 SWMUs/AOCs were recommended for further action This action included additional subsurface investigation or other activities such as inspection of underground storage tanks, repair of cracks in concrete-paved areas, and excavation of contaminated soil Of these 25 SWMUs/AOCs, 2 were recommended for further action under the Phase II RI/FS program. Site 23 was investigated and recommended for no further action
1994	Phase I soil gas survey for Sites 24 and 25	Identify potential VOC sources at Sites 24 and 25	The soil gas survey investigated soil conditions (generally 12 to 20 feet below ground surface) Elevated concentrations of VOCs were detected beneath the aircraft maintenance hangars (Buildings 296 and 297) TCE was the compound most frequently detected. Other VOCs detected included PCE, 1,1-dichloroethene, Freon 113, carbon tetrachloride, and chloroform

(table continues)

Table 2-1 (continued)

Date	Investigation	Objective	Summary of Findings
1994	Interviews with active and retired personnel	Supplement and confirm information from past investigations and interviews, obtain a better understanding of current and historical operations, and identify new areas of potential environmental concern.	The interview panel provided information about types of operations that occurred on-Station and types of chemicals used in these operations.
1995	Final Work Plan for Phase II RI/FS and associated documents	Present an approach to conduct the Phase II RI at 24 sites at MCAS El Toro using the U.S. EPA DQO process. Establish background concentrations of metals in soils. Establish a process to collect sufficient information to support decisions on risk management.	Established DQO process for conducting RI/FS. Two new sites, Sites 24 and 25, were established for investigation in Phase II.
1996	Evaluation of background concentrations and reference levels in soil	Calculate background concentrations for metals in soil and reference levels for herbicides and pesticides in soil at MCAS El Toro.	Background concentrations for metals and reference levels for herbicides were developed for comparison with site-specific analytical results in the RI to identify potential releases.
1996	Interim-action RI/FS for groundwater contamination designated as OU-1	Characterize groundwater contamination and evaluate potential actions to remediate VOC-contaminated groundwater in the principal aquifer.	A range of remedial alternatives has been prepared. The preferred alternative is expected to be presented for public comment in 2001.
1996	RI for vadose zone and groundwater contamination at Site 24	Determine the nature and extent of VOC contamination at Site 24 and evaluate the human-health risk due to this contamination.	Soil and groundwater were investigated. The RI linked the groundwater hot spot identified during the Phase II RI with high concentrations of TCE in the vadose zone beneath Buildings 296 and 297.
1996	FS for vadose zone contamination at Site 24	Evaluate potential actions to remediate the VOC-contaminated soils at Site 24.	SVE is presented as the presumptive remedy most appropriate for remediation of contaminated soils.

(table continues)

Table 2-1 (continued)

Date	Investigation	Objective	Summary of Findings
1997	Draft final RI reports for OU-3A (including Site 16) and Site 25	Determine the nature and extent of contamination at Sites 4, 6, 8, 9, 10, 11, 12, 13, 15, 16, 19, 20, 21, 22, and 25 and evaluate the human-health risk due to this contamination.	Investigations revealed that contamination at Sites 4, 6, 9, 10, 13, 15, 19, 20, 21, and 22 is limited to shallow soils. Contamination at Site 25 is limited to sediment and surface water. In all cases, risks to human health are within the range generally considered acceptable by the U.S. EPA. A recommendation for no action was made to the BCT and was approved. An FS was recommended for Site 16 and portions of Sites 8, 11, and 12.
1997	RI for landfill sites	Determine the nature and extent of contamination at Sites 2, 3, 5, and 17, and evaluate the human-health risk due to this contamination.	Air, soil, and groundwater were investigated. Risks at each site are driven by contamination in soil. VOCs are present in groundwater above MCLs at Site 2. Landfill gas controls are not necessary, and no principal threat wastes were found in soil gas.
1997	FS for landfill sites	Evaluate potential actions to remediate the landfills and allow site closure.	Capping, institutional controls, and monitoring are presented as the presumptive remedies most appropriate for remediation of the landfills.
1997	FS for groundwater at Site 24	Evaluate potential actions to remediate VOC-contaminated groundwater at Site 24.	A range of remedial alternatives has been prepared. The preferred alternative is expected to be presented for public comment in 2001.
1997	Interim ROD for Site 24 vadose zone	Select interim remedial alternative for soil at Site 24.	SVE was selected as the remedial alternative for soil at Site 24.
1997	ROD for OU-2A and OU-3A no action sites	Select remedial alternative for selected OU-2A and OU-3A sites.	No action was selected for Sites 4, 6, 9, 10, 13, 15, 19, 20, 21, 22, and 25.
1998	FS for OU-3A Sites 8, 11, and 12	Evaluate potential actions to remediate contaminated soil.	Excavation and removal are presented as the actions most appropriate for remediation of contaminated soil at portions of Sites 8, 11, and 12. Other portions of these sites do not require further action.

(table continues)

Table 2-1 (continued)

Date	Investigation	Objective	Summary of Findings
1998	Evaluation of metals in groundwater at MCAS El Toro	Evaluate whether the reported concentrations of metals in groundwater at MCAS El Toro reflect ambient conditions or are the result of anthropogenic sources associated with historical station operations.	Although the concentrations of some metals at various sites at MCAS El Toro exceed MCLs, such conditions are characteristic of basinwide groundwater quality conditions and are not indicative of site-related contamination.
1999	Continuation of RI for OU-3B Sites 7 and 14	Determine the nature and extent of contamination at Sites 7 and 14, and evaluate the human-health risk due to this contamination.	Investigations revealed that contamination at Sites 7 and 14 is limited to shallow soils. Human-health risks are within the range considered generally acceptable by the U.S. EPA. A recommendation for no action was made to the BCT.
1999	ROD for Site 11	Select alternative for remediation of contaminated soil.	Excavation and removal are selected for remediation of soil at Site 11.
2000	Historical radiological assessment of MCAS El Toro	Evaluate historical use, storage, and disposal of radiological materials at MCAS El Toro and recommend followon investigations of potentially impacted areas.	The final Historical Radiological Assessment Report, dated May 2000, identified candidate sites for radiological surveys on the basis of historical information. Sites 7 and 14 do not require further radiological investigation.
2001	Radiological survey	Evaluate selected sites and buildings for radiological materials or contamination.	The final Radiological Survey Plan was issued in January 2001.
2001	FS for OU-3B Site 16	Evaluate potential actions for contaminated soil and groundwater.	The FS is expected to be finalized in mid-2001.

Acronyms/Abbreviations:
- AOC – area of concern
- BCT – BRAC Cleanup Team
- BRAC – Base Realignment and Closure
- DON – Department of the Navy
- DQO – data quality objective
- FFA – Federal Facilities Agreement
- FS – feasibility study
- IAS – initial assessment study
- MCAS – Marine Corps Air Station
- MCl – maximum contaminant level
- NPL – National Priorities List
- OCWD – Orange County Water District
- OU – operable unit

(table continues)

Table 2-1 (continued)

PCB – polychlorinated biphenyl
PCE – tetrachloroethene
RCRA – Resource Conservation and Recovery Act
RI – remedial investigation
ROD – record of decision
RWQCB – (California) Regional Water Quality Control Board
SVE – soil vapor extraction
SVOC – semivolatile organic compound
SWMU – solid waste management unit
TCE – trichloroethene
U.S. EPA – United States Environmental Protection Agency
VOC – volatile organic compound

Section 3
HIGHLIGHTS OF COMMUNITY PARTICIPATION

A Community Relations Plan (BNI 1996b) was developed to document concerns identified during community interviews and to provide a detailed description of the community relations activities planned in response to information received from the community. The initial plan was prepared in 1991 and revised in 1993 and 1996. The revisions incorporated the most recent assessment of community issues, concerns, and information needs related to the ongoing environmental investigation and remediation program at MCAS El Toro.

The community relations program includes specific activities for obtaining community input and keeping the community informed. These activities include conducting interviews, holding public meetings, issuing fact sheets to provide updates on current remediation activities, maintaining an information repository where the public can access technical documents and program information, disseminating information to local and regional media, and making presentations to local groups.

Community members and local governmental agencies have also participated in planning for the reuse of MCAS El Toro through development of the Community Reuse Plan.

3.1 RESTORATION ADVISORY BOARD

In 1994, individuals from local communities began to play an increasingly significant role in the environmental restoration process with the establishment of the Restoration Advisory Board (RAB). Original membership in the RAB, which was solicited by the Marine Corps/Navy through paid newspaper notices, exceeded 50 individuals, including business and homeowners' representatives, interested residents, local elected officials, and regulatory agency staff.

Currently, the RAB is composed of 28 registered members. Twelve RAB members are community members or private citizens. The remaining 16 RAB members are representatives from various government agencies. RAB meetings occur every 2 months, are open to the public, and include interested representatives from the Marine Corps/Navy, city and county offices, and regulatory agencies. Meetings are held in the evenings after normal working hours from 6:30 to 9 p.m. at the city of Irvine City Hall, Conference and Training Center. Several members of the RAB have taken information from the regular meetings back to the groups they represent, thus contributing to an increased awareness of the IRP process. In addition, members of the public can contact RAB members to obtain information or express concerns to be discussed at subsequent RAB meetings.

Copies of the RAB meeting minutes are available at the MCAS El Toro Information Repository, located at the Heritage Park Regional Library in Irvine, California. RAB meeting minutes are also located on the Navy's SWDIV "Environmental" web page, which is at:

http://www.efdsw.navfac.navy.mil/pages/Envrnmtl.htm

The OU-3B sites have been discussed at several RAB meetings.

3.2 PUBLIC MAILINGS

Public mailings, including information updates, fact sheets, and proposed plans, have been used to assure an even broader dissemination of information within the local community. The first information update announcing the IRP process at MCAS El Toro was delivered in November 1991 to residents surrounding MCAS El Toro and mailed to city, state, and federal officials; agencies; local groups; and individuals identified in the Community Relations Plan. Subsequent updates and fact sheets were mailed to the community as significant remediation milestones occurred (Table 3-1). These publications have included information concerning the status of site investigations, the upcoming remedy selection process, ways the public can participate in the investigation and remediation of MCAS El Toro, and the availability of the MCAS El Toro administrative record.

Proposed plans are summaries of remedial alternatives proposed for a site or group of sites. The plan describes each of the alternatives, evaluates each alternative against nine criteria, and identifies the preferred alternative. This document is issued to the public before the beginning of a public comment period to provide information and solicit public input on the potential remedial options that underwent detailed evaluation. Once the public comment period closes, the comments are compiled, reviewed by the BCT, and used to refine the remedial action. The final decision and response to comments (known as a Responsiveness Summary) are presented in the record of decision (ROD).

The updates, fact sheets, and proposed plans are mailed to approximately 450 households, businesses, public officials, and agencies in an effort to reach as many community members as possible.

3.3 COMMUNITY PARTICIPATION FOR OU-3B NO ACTION SITES

The final RI Report for Sites 7 and 14 was issued in March 2000. The Proposed Plan for OU-3B Sites 7 and 14 was distributed to community members on the MCAS El Toro project mailing list in September 2000. The Proposed Plan and the RI Report were also made available to the public at the information repository maintained at the Heritage Park Regional Library in Irvine, California. The notice of availability for these documents was published in the *Orange County Register* and the *Los Angeles Times (Orange County Edition)* approximately 1 week before the start of the public comment period on the proposed plan. The notices also announced the availability of the administrative record file for review. Complete administrative record files are available at the SWDIV office in San Diego and at MCAS El Toro. A partial record file is available for review at the information repository. The information repository also contains a complete index of the administrative record file along with information about how to access the complete file at MCAS El Toro.

Table 3-1
Summary of MCAS El Toro Updates, Fact Sheets, and Proposed Plans

Fact Sheet Number	Date	Summary of Contents
—	11/91	Information update/IRP process
—	12/92	Information update
1	12/93	Phase II RI results
2	12/93	RAB formation
3	07/95	Information update/Tank 398
4	10/95	Information update/engineering evaluation/cost analysis
5	11/95	MCAS El Toro Building 673-T3 Certification for Closure
6	04/96	Looking back–moving forward update on IRP progress
7	12/96	Groundwater remediation OU-1 and OU-2A
—	04/97	Proposed Plan for Site 24 Vadose Zone
—	06/97	Proposed Plan for No Action Sites
—	05/98	Proposed Plan for Landfill Sites 2, 3, 5, and 17
8	02/99	SVE design at Site 24
—	05/99	Proposed Plan for OU-3A Sites 8, 11, and 12
—	09/00	Proposed Plan for OU-3B No Action Sites 7 and 14

Acronyms/Abbreviations:
IRP – Installation Restoration Program
MCAS – Marine Corps Air Station
OU – operable unit
RAB – Restoration Advisory Board
RI – remedial investigation
SVE – soil vapor extraction

A public comment period for the Proposed Plan for OU-3B No Action Sites 7 and 14 was held from 10 October to 08 November 2000. In addition, a public meeting was held on 25 October 2000. This meeting was announced in the *Orange County Register* and *Los Angeles Times (Orange County Edition)* on 09 October 2000.

At the public meeting, representatives from the DON, MCAS El Toro, and environmental regulatory agencies presented information about site conditions and the remedial alternatives under consideration. A court reporter recorded public comments. A response to the comments received during this period regarding Sites 7 and 14 is included in the Responsiveness Summary, which is part of this ROD. A copy of the transcript from the meeting is also included in this ROD as Attachment B.

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Section 4
SCOPE AND ROLE OF OPERABLE UNIT

Twenty-five IRP sites have been investigated at MCAS El Toro. Twenty-four of these sites are divided into three OUs. OU-1 encompasses Site 18 (Regional Groundwater). OU-2 is subdivided into OU-2A, OU-2B, and OU-2C. OU-3 is subdivided into OU-3A and OU-3B.

OU-2A encompasses Site 24 (VOC Source Area) and Site 25 (Major Drainages). Area OU-2A was defined to address potential sources of regional groundwater contamination. Site 25 was included in this OU because it was not known whether the major drainages at MCAS El Toro were acting as a source of the VOC contamination in the shallow groundwater unit beneath the Station and in the principal aquifer off the Station. The Phase II RI of Site 25 showed that this site is not a source of regional groundwater contamination, and the site was recommended for no action. Site 24 (vadose zone) and Site 25 were addressed in previous RODs. Site 24 (groundwater) and Site 18 will be addressed in a separate ROD.

OU-2B encompasses landfill Sites 2 and 17. An interim ROD for OU-2B was signed in July 2000. This ROD is expected to be finalized in 2001.

OU-2C encompasses landfill Sites 3 and 5. The ROD for Sites 3 and 5 is also expected to be finalized in 2001.

OU-3A and OU-3B comprise the remaining 17 IRP sites at MCAS El Toro that focus on potential surface-soil contamination. OU-3A encompasses Sites 4, 6, 8, 9, 10, 11, 12, 13, 15, 19, 20, 21, and 22. Ten of these sites (4, 6, 9, 10, 13, 15, 19, 20, 21, and 22) were investigated, found to contain no unacceptable risks to human health or the environment, and recommended for no action. These sites were addressed along with OU-2A Site 25 in a previous ROD. Site 11 was addressed in a ROD that was finalized in September 1999. Sites 8 and 12 will be addressed in a separate ROD that is expected to be issued in 2001.

OU-3B encompasses Sites 1, 7, 14, and 16. Sites 7 and 14 are addressed in this ROD. Site 16 has been investigated, and alternatives for remediation of the site are currently being evaluated. The Site 16 ROD is expected to be issued in 2001. Site 1 is scheduled for investigation in 2001.

Site 23 was evaluated in the RFA under the FFA and was eliminated as an environmental concern.

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Section 5
SUMMARY OF SITE CHARACTERISTICS

This section describes the regional characteristics of MCAS El Toro, and provides a brief history of the source of contamination at Sites 7 and 14, summarizes the sampling performed at these sites, and presents tables summarizing site-specific sampling results. Section 5 concludes with a discussion of current and potential future migration for chemicals of potential concern at the sites. A complete discussion of sampling locations and methodologies, compounds detected at each site, and the nature and extent of contamination appears in the Phase II Final RI Report for Sites 7 and 14 (BNI 2000).

The nature and extent of contamination at Sites 7 and 14 is based on the Phase I and II RI data presented in the final RI Report for Sites 7 and 14 (BNI 2000). The Phase I RI was conducted during 1992 and 1993. A Phase II RI conducted in 1997 included portions of Site 7. Additional Phase II investigation of Sites 7 and 14 was conducted during 1999. The Phase II investigation consisted of a review of data gathered previously and additional sampling and analysis designed to fill in data gaps from the Phase I investigation and to provide information necessary to conduct a baseline human-health risk assessment (HHRA).

Data collected during the Sites 7 and 14 RI include the results of shallow and deeper subsurface soils investigations, groundwater investigations, aerial photograph reviews, and interviews with MCAS El Toro personnel. A soil gas survey was also conducted at and in the vicinity of Site 7. This survey was associated with Site 24, the VOC Source Area. (Site 7 is within the boundary of Site 24.) The VOCs reported within the Site 7 boundaries were investigated and evaluated as part of the VOC source investigation at Site 24 and are discussed in the Interim ROD for that site (BNI 1997a).

5.1 REGIONAL CHARACTERISTICS

MCAS El Toro is situated on the southeastern edge of the Tustin Plain, a gently sloping surface of alluvial fan deposits derived mainly from the Santa Ana Mountains. The Tustin Plain, bounded on the north and east by the Santa Ana Mountains and on the south by the San Joaquin Hills, is at the southeast end of the Los Angeles Basin, a large sedimentary basin in the Peninsular Ranges Geologic Province. The elevation at MCAS El Toro ranges from 215 feet above mean sea level (MSL) in the west to approximately 800 feet above MSL to the east.

5.1.1 Geology and Hydrogeology

The Tustin Plain is a broad basin composed of Quaternary marine and alluvial sediments deposited on Tertiary marine sedimentary bedrock (Fife 1974). The Quaternary deposits are generally less consolidated and more permeable than the bedrock. The Tustin Plain is bound by bedrock exposed in the Santa Ana Mountains to the north and east and in the San Joaquin Hills to the south.

The Tertiary bedrock consists of semiconsolidated marine sandstones, siltstones, and conglomerates of the Sespe, Vaqueros, Topanga, Capistrano, Niguel, and Fernando formations (CDMG 1981). The lower-Pliocene Fernando formation forms the base of the water-bearing units at MCAS El Toro (Herndon and Reilly 1989). The Fernando

formation interfingers with marine clayey and sandy siltstones of the Capistrano and Niguel formations west of MCAS El Toro (JMM 1988).

Pleistocene sediments predominantly composed of interlayered fine-grained lagoonal and near-shore marine deposits unconformably overlie the Tertiary sedimentary bedrock (Singer 1973). These deeper Quaternary sediments may be equivalent to the lower Pleistocene San Pedro formation, which consists of semiconsolidated silts, clays, and sands with interbedded limestone.

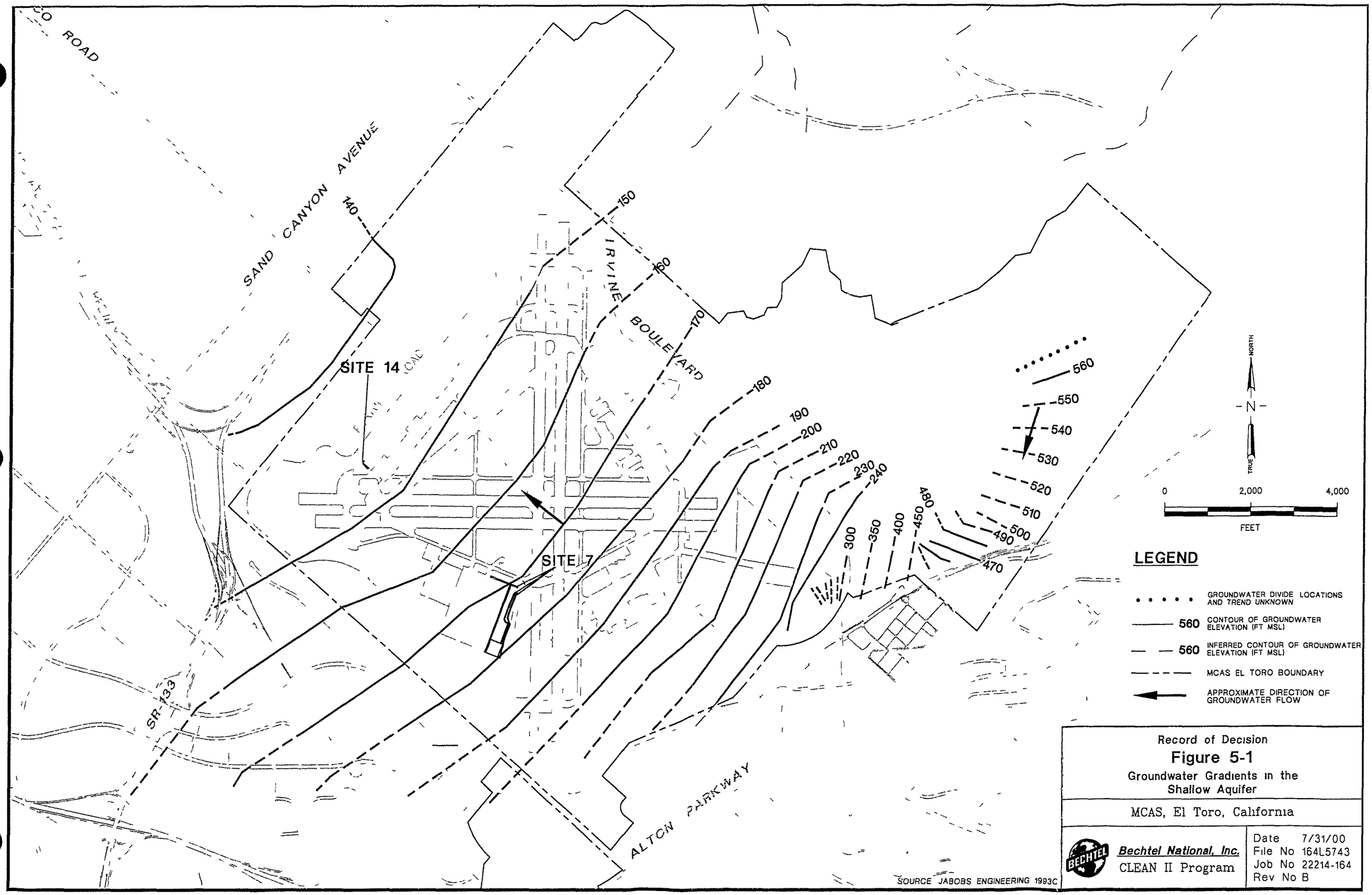
Conformably overlying the Pleistocene sediments are Holocene materials consisting of isolated coarse-grained, stream-channel deposits within fine-grained overbank deposits. These Holocene sediments were deposited as alluvium and range in thickness up to 300 feet (Herndon and Reilly 1989).

MCAS El Toro lies within and immediately adjacent to the Irvine Forebay I Groundwater Subbasin (Irvine Subbasin) (RWQCB 1995). Regional aquifer systems in the Irvine Subbasin have been described as a series of discontinuous lenses of clayey sands and gravels contained within an assemblage of sandy clay and silt. These aquifer systems are within the less consolidated and more permeable Quaternary sedimentary deposits. Regionally, the stratigraphic units within the aquifers are considered to be laterally extensive and representative of two homogeneous systems, a shallow aquifer and a deeper zone (referred to as the "principal aquifer"). An intervening horizon of fine-grained materials hydraulically separates the shallow and deep aquifers but appears to allow leakage in some locations.

The depth to shallow groundwater beneath MCAS El Toro ranges from approximately 45 to 60 feet below ground surface (bgs) in the foothills, to approximately 85 feet bgs along the southwest boundary, to greater than 240 feet bgs along Irvine Boulevard (JEG 1993a). Groundwater in the shallow aquifer flows toward the northwest at gradients ranging from 0.005 to 0.025 foot/foot (Figure 5-1). The hydraulic gradient has been influenced strongly by the pumping of irrigation wells west of MCAS El Toro. Average linear groundwater flow velocities are reported to range from 0.02 to 1.9 feet per day (JMM 1990).

5.1.2 Surface Hydrology

Surface drainage near MCAS El Toro generally flows southwest, following the slope of the land perpendicular to the trend of the Santa Ana Mountains. Several washes originate in the hills northeast of MCAS El Toro and flow through or adjacent to the Station en route to San Diego Creek. Off-Station drainage from the hills and upgradient irrigated farmland combines with Station runoff at MCAS El Toro (generated from the extensive paved surfaces) and flows into four main drainage channels. Three of these drainage channels are contiguous with natural washes that originate in the Santa Ana Mountains: Borrego Canyon, Agua Chinon, and Bee Canyon. The fourth drainage is Marshburn Channel (Figure 5-2).


CO ROAD
SAND CANYON AVENUE
IRVINE BOULEVARD
ALTON PARKWAY
SR-133
SITE 14
SITE 7
140
150
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170
180
190
200
210
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520
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540
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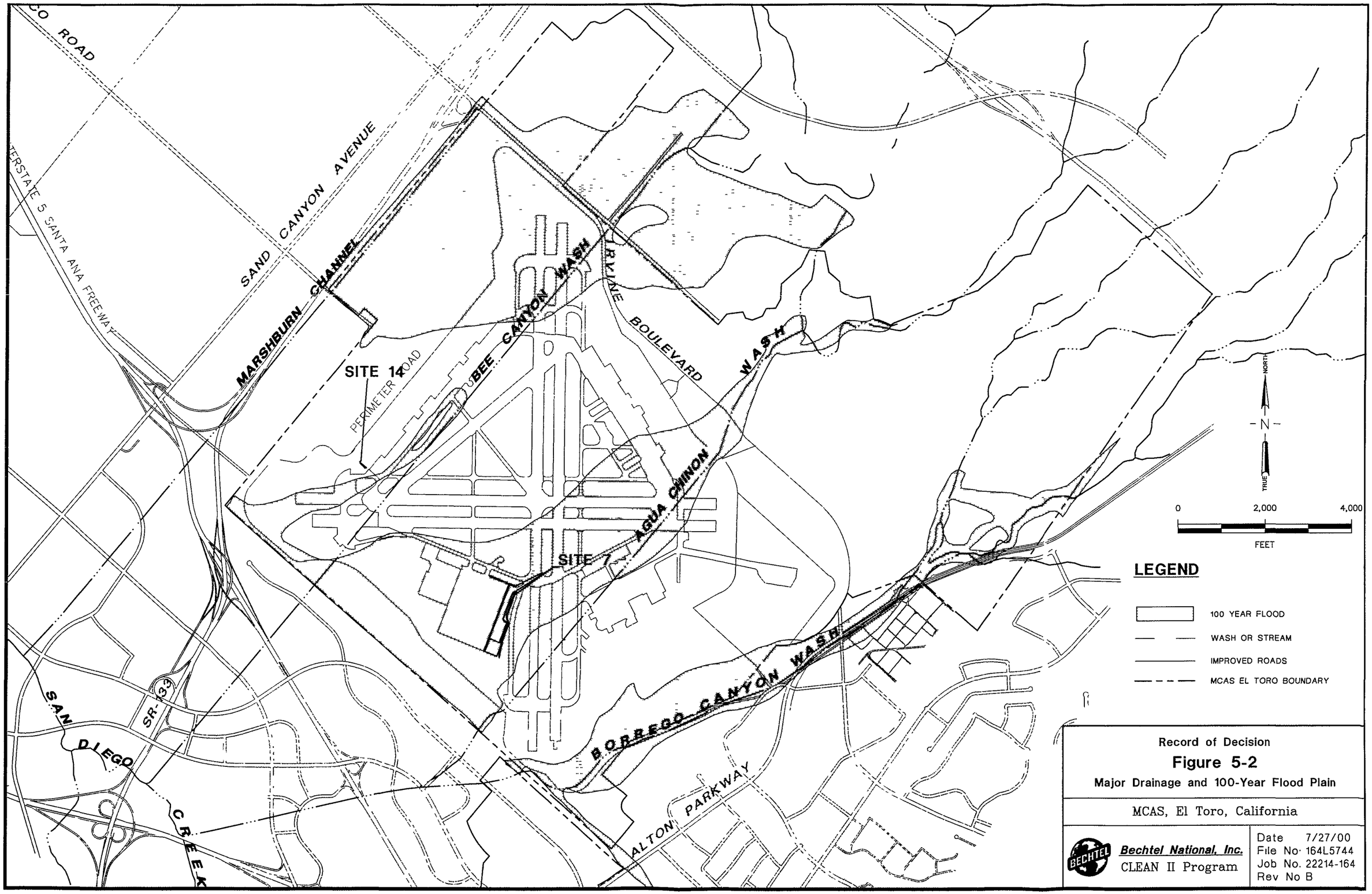
560
NORTH
TRUE
N
0
2,000
4,000
FEET
LEGEND
GROUNDWATER DIVIDE LOCATIONS AND TREND UNKNOWN
560 CONTOUR OF GROUNDWATER ELEVATION (FT MSL)
560 INFERRED CONTOUR OF GROUNDWATER ELEVATION (FT MSL)
MCAS EL TORO BOUNDARY
APPROXIMATE DIRECTION OF GROUNDWATER FLOW
SOURCE JABOBS ENGINEERING 1993C
Record of Decision
Figure 5-1
Groundwater Gradients in the Shallow Aquifer
MCAS, El Toro, California
Bechtel National, Inc.
CLEAN II Program
Date 7/31/00
File No 164L5743
Job No 22214-164
Rev No B



Record of Decision

Figure 5-2

Major Drainage and 100-Year Flood Plain

MCAS, El Toro, California

Bechtel National, Inc.
CLEAN II Program

Date 7/27/00
File No· 164L5744
Job No. 22214-164
Rev No B

Borrego Canyon Wash flows along the southeast boundary of MCAS El Toro. The wash is unlined in the Santa Ana Mountains and unlined downstream of Irvine Boulevard. Borrego Canyon Wash crosses the southern corner of the Station and joins Agua Chinon Wash about 1/4 mile downstream of the Station boundary.

Both Agua Chinon and the Bee Canyon Washes cross the central portion of MCAS El Toro and receive on-Station runoff mainly through storm sewers. These washes are contained in culverts through most of their pathways across the Station. Both washes are unlined along several hundred feet at the southwest edge of the Station and are lined again in a culvert beneath the Irvine Spectrum development adjacent to the southwestern boundary of the Station. Marshburn Channel is a lined drainage channel that runs along the northwestern boundary of MCAS El Toro. The channel receives runoff from the western part of the Station. All of the drainages ultimately discharge into San Diego Creek.

The MCAS El Toro Master Plan (Plan) indicates that much of the Station lies within the 100-year flood plain. Existing drainage systems were developed for agricultural use, not for the increased flows generated by the urban development now surrounding the base. Approximately 15 acres of an agricultural lease was flooded and crops were destroyed during a storm on 29 November 1997. The area included in the 100-year flood plain is shown in Figure 5-2.

5.1.3 Rainfall and Prevailing Wind Conditions

The mean average rainfall at MCAS El Toro is approximately 12.2 inches, most of which occurs from November through April (JEG 1993a). Because of the low average annual rainfall and high evapotranspiration rates, net infiltration from precipitation is less than 5 inches per year (BNI 1996c).

From March through October, the prevailing wind is from the west, averaging 6 knots. From November through February, the prevailing wind is from the east, averaging 4 knots. Strong, dry, gusty, offshore winds (locally known as "Santa Ana winds") are common during late fall and winter. The typically dry conditions and persistent winds may result in light to moderate wind erosion.

5.2 SITE 7, DROP TANK DRAINAGE AREA NO. 2

Site 7 is located in the southwestern quadrant of MCAS El Toro, north and west of Buildings 295 and 296, at an elevation of approximately 275 feet MSL. The approximate site area is 200,000 square feet. Most of the surface of Site 7 is unpaved and fairly well vegetated, but some paved areas are present as well as two small buildings. Site 7 is generally flat, and surface flow is induced only during significant rainfall events. Surface drainage is conveyed generally to the south toward Agua Chinon Wash.

5.2.1 Geology and Hydrogeology

A review of the RI boring logs indicates that the soil at Site 7 consists of poorly to well-graded sand, silty sand, and sandy silt. Soil in the area is classified as Sorrento loam,

which develops on nearly flat (0 to 2 percent slope) floodplain deposits like those at Site 7. Sorrento loam is typically a well-drained soil characterized by slow surface runoff and a slight erosion hazard because of the nearly flat surface (Wachtell 1978). The shallow groundwater unit is present at approximately 120 feet bgs. Regional groundwater flow beneath Site 7 is generally to the west-northwest.

5.2.2 Site History

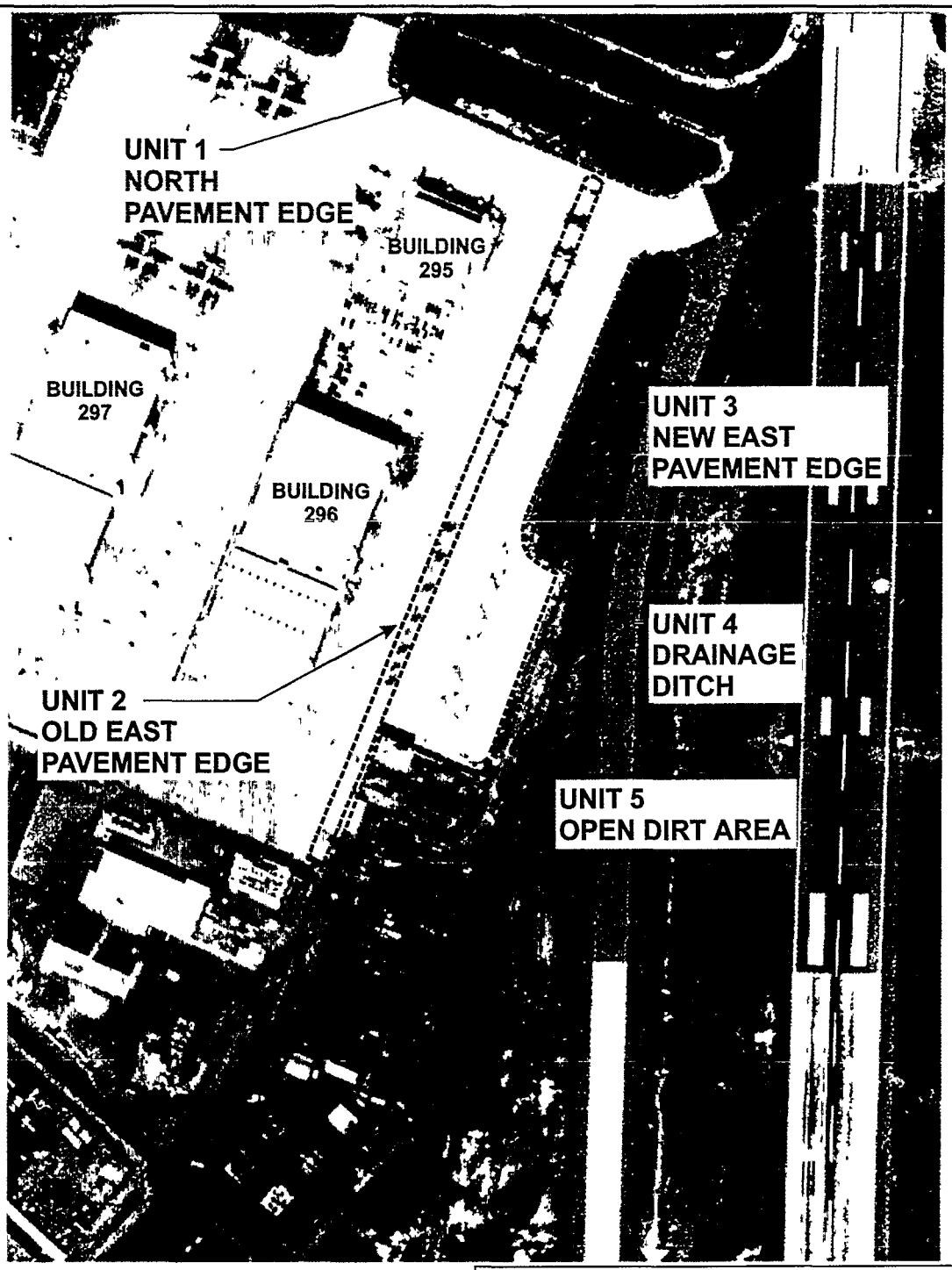
Site 7 was previously used for aircraft drop tank storage and drainage. In the northern area, aircraft drop tanks were drained and washed on a concrete apron from approximately 1969 to 1983 (Figure 5-3). The mixture of residual fuel and washwater drained off the edge of the concrete apron onto the adjacent grassy areas. An estimated 7,000 gallons of jet propellant – Grade 5 (JP-5) fuel and lubrication oil were disposed in this area. In the eastern portion of the site, soil areas near the aircraft hangars (Buildings 296 and 297) are suspected to have been sprayed with lubrication oil and JP-5 jet fuel for dust control. More than 11,000 gallons of lubrication oil and nearly 4,000 gallons of JP-5 may have been used for dust control between 1972 and 1983. From 1972 to 1978, the area comprising Unit 5 served as an unpaved parking lot and was also sprayed with lubricant oils for dust control (JEG 1993a).

5.2.3 Site Investigations

Investigations conducted at Site 7 included an RFA, Phase I and II RIs, two aerial photographic surveys, and employee interviews. A soil gas survey was also conducted at and in the vicinity of Site 7. This survey was associated with Site 24, the VOC Source Area. (Site 7 is within the boundary of Site 24.) The VOCs reported within the Site 7 boundaries were investigated and evaluated as part of the VOC source investigation at Site 24 and are discussed in the Interim ROD for that site (BNI 1997a).

5.2.3.1 RCRA FACILITIES ASSESSMENT

During the RFA, solid waste management units (SWMUs)/Areas of Concern (AOCs) 71 and 72 were identified within the Site 7 boundaries but not investigated. The exact location of SWMU/AOC 71 was unknown but believed to be within Unit 1. SWMU/AOC 72 is located in the southern part of Unit 3 (Jacobs 1993b). Because both of these SWMUs/AOCs were located within Site 7 boundaries, the Phase II RI/FA Work Plan indicated that a visual inspection would be conducted of the SWMUs/AOCs locations. If a visual evidence of a surface release was not identified no sampling would be performed at these SWMUs/AOCs (BNI 1995a). The visual evaluation of both SWMUs during the Phase II RI fieldwork did not identify evidence of a surface release at either location (BNI 1997a). As a result, SWMU/AOC 71 was recommended for no further action. It is the DON's intention to sample SWMU/AOC 72 as an inactive temporary accumulation area and to submit a closure report to DTSC by calendar year 2002.



N

SOURCE: AERIAL PHOTOBANK, INC.
SAN DIEGO, CALIFORNIA
DATE: 1/12/96

Record of Decision

Figure 5-3

Site Aerial Photograph (1/12/96)
Site 7 - Drop Tank Drainage Area No. 2

MCAS, El Toro, California

Bechtel National, Inc.
CLEAN II Program

Date: 11/14/00
File No: 164E5745
Job No: 22214-164
Rev No: B

5.2.3.2 PHASE I REMEDIAL INVESTIGATION

To facilitate the Phase I RI, Site 7 was divided into five units on the basis of common historical activities, aerial photograph reviews, and relative locations (Figure 5-3). The five units are:

- North Pavement Edge (Unit 1),
- Old East Pavement Edge (accepted for no further investigation by the BCT during preparation of the work plan for the OU-3A and OU-3B Phase II RI fieldwork [BNI 1995a,b,c]) (Unit 2),
- New East Pavement Edge (Unit 3),
- Drainage Ditch (Unit 4), and
- Open Dirt Area south of Building 296 (Unit 5).

Unit 1, a concrete pavement edge approximately 700 feet long and located 200 feet north of Building 295, is almost completely devoid of vegetation. Aircraft matting covers part of the center of this unit. Unit 2 was a concrete pavement edge approximately 1,500 feet long and perpendicular to Unit 1. In 1979, the pavement was expanded and Unit 2 is presently covered by approximately six inches of concrete. Unit 3 is a well vegetated concrete pavement edge 300 to 400 feet west of Building 296. Unit 4 is a drainage ditch approximately 50 feet east of Unit 3 that is well vegetated and exhibits no signs of erosion from surface water flow. Unit 5 is a square area of approximately 90,000 square feet. Pavement covers the southern half of the unit, while the northern half is partially vegetated. Surface drainage from Site 7 flows generally southward and eventually discharges into Agua Chinon Wash.

Sixty-two soil samples were collected from 19 borings in Units 1 through 5 during the Phase I RI. These included:

- ten shallow-soil (less than 10 feet bgs) samples from four borings and eight deeper-soil (greater than 10 feet bgs) from one boring in Unit 1,
- nine shallow-soil samples from four borings and seven deeper-soil samples from one boring in Unit 2,
- seven shallow-soil samples from three borings in Unit 3,
- six shallow-soil samples from three borings in Unit 4, and
- eight shallow-soil samples from three borings and seven deeper-soil samples from one boring in Unit 5.

Soil samples collected during the Phase I RI were analyzed for VOCs, SVOCs, pesticides/PCBs, total petroleum hydrocarbons (TPH), total recoverable petroleum hydrocarbons (TRPH), and target analyte list (TAL) metals. Selected samples were also analyzed for total organic carbon.

Groundwater samples were collected during the Phase I RI from three on-site monitoring wells and three off-site monitoring wells. The Site 7 wells were also sampled on several

occasions after the Phase I RI. The findings of the Phase II RI for the VOC source area and the Phase I RI for Site 7 demonstrated that Site 7 is not a source of regional groundwater contamination. Groundwater contamination beneath Site 7 is being addressed under OU-2A and is, therefore, not addressed in this ROD.

Chemicals reported in soil above the detection limits in the Phase I RI included VOCs, SVOCs, polynuclear aromatic hydrocarbons (PAHs), pesticides, diesel, gasoline, TRPH, and TAL metals above background. No PCB was reported above the detection limit.

As a result of the Phase I RI, Units 1, 3, 4, and 5 were recommended for further investigation in a Phase II RI. The plans for further investigation of these units were presented in the Phase II Final Work Plan Phase II RI/FS MCAS El Toro (Final Work Plan Phase II RI/FS) issued in July 1995.

The analytical results from soil samples collected within Unit 2 did not identify concentrations of VOCs, SVOCs, pesticides, or PCBs above laboratory detection limits. In addition, TPH as diesel was reported in only three samples at concentrations less than 44 milligrams per kilogram (mg/kg) and TPH as gasoline was reported in only two samples at concentrations less than 0.4 mg/kg. Based on these analytical results, Unit 2 was recommended for no further action. BCT concurred with the DON's no further action recommendation and this decision was documented in the final Work Plan Phase II RI/FS. Consequently, no sampling was conducted at Unit 2 during the Phase II RI (BNI 1995a).

5.2.3.3 UNITED STATES ENVIRONMENTAL PROTECTION AGENCY AERIAL PHOTOGRAPH SURVEY

During the U.S. EPA aerial photograph review, 1970 photographs indicated vertical tanks, open storage areas, and staining features within Site 7. In a 1980 photograph, the concrete apron east of Buildings 296 and 297 had been extended further east, which moved the drainage area to the new concrete apron edge. Staining and easterly flow of liquid were present in most aerial photographs of Site 7 (JEG 1993a).

5.2.3.4 SCIENCE APPLICATIONS INTERNATIONAL CORPORATION AERIAL PHOTOGRAPH SURVEY

The Science Applications International Corporation (SAIC) Aerial Photograph Assessment noted that the extension of the concrete apron east of Buildings 296 and 297 was completed between 1971 and 1973. Stains caused by liquids flowing easterly from the concrete apron were observed in 1946, 1961, and 1981 photographs (SAIC 1993).

5.2.3.5 EMPLOYEE INTERVIEWS

On 26 May 1994, a meeting was held at MCAS El Toro to interview active and retired personnel from the Station's Fuel Operations Division and Facility Management Department who had extensive knowledge of Station operations and procedures for storage and disposal of hazardous materials and waste. The interviewers during the meeting were Cal-EPA personnel, Navy and Station personnel, and the Navy and

U.S. EPA contractors. During these interviews, the following information pertaining to the Drop Tank Drainage Area No. 2 (Site 7) was obtained (JEG 1994c).

- A 500-gallon bowser was observed near the hazardous waste storage area. Mobile bowser tanks were commonly used throughout the Station to store waste oil collected from maintenance activities. A common practice was to spread the waste oil collected in these tanks onto unpaved areas of the Station for dust control.
- Some of these bowsers may have been misinterpreted as vertical tanks in the SAIC Aerial Photograph Report.
- Various types of equipment and chemical waste were stored in the areas east of Site 7. Some of the equipment included paint lockers, compressors, and pilot seat ejection charges. The types of chemicals included waste solvents, oils, and flammable materials.

5.2.3.6 PHASE II REMEDIAL INVESTIGATION

The Phase II RI consisted of a review of the previous investigations and additional sampling necessary to perform a baseline HHRA and determine whether remedial action is necessary at Site 7. As noted in Section 5.2.3.2, 49 shallow-soil samples were collected from 19 boring locations in Units 1 through 5 during the Phase I investigation. Another 91 shallow-soil samples were collected from 24 boring locations in Units 1, 3, 4, and 5 during the Phase II investigation. Phase II samples were collected at random locations to characterize additional areas not sampled during the Phase I RI. Fifteen samples from Units 4 and 5 were field screened for VOCs, TPH, and PAHs. Samples were also analyzed at a fixed-base laboratory for VOCs, SVOCs, PAHs, TPH, pesticides, and TAL metals.

A review of the Phase I analytical data for the deeper subsurface-soil samples suggested that the types and magnitude of analytes reported in the deeper subsurface soil beneath Site 7 did not pose a threat to groundwater. Therefore, in accordance with the Phase II Work Plan and with concurrence from the BCT, conditions within the deeper subsurface-soil interval were not investigated further during the Phase II RI.

Results for Phase II shallow-soil samples are summarized as follows.

- Eleven VOCs were reported above detection limits at concentrations up to 72 micrograms per kilogram (µg/kg) in shallow-soil samples from Units 1, 3, 4, and 5.
- Twenty-two SVOCs and 13 PAHs were reported above detection limits at concentrations up to 7,000 µg/kg in shallow-soil samples from Units 1, 3, 4, and 5.
- Diesel and motor oil were reported above detection limits at concentrations up to 3,800 milligrams per kilogram (mg/kg) in shallow-soil samples from Units 1, 3, 4, and 5.
- Sixteen of the 23 TAL metals (aluminum, arsenic, barium, beryllium, cadmium, chromium, cobalt, copper, lead, manganese, mercury, nickel, selenium, silver,

thallium, and zinc) were reported at concentrations above their respective background values in shallow-soil samples from Units 1, 3, 4, and 5.

5.2.3.7 SUMMARY OF PHASE I AND PHASE II RESULTS

Table 5-1 summarizes the results of the Phase I and Phase II soil investigations at Site 7. The HHRA performed during the RI (Section 7) showed PAHs and TAL metals above background were the predominant risk drivers at Site 7. Figures 5-4 and 5-5 show the location and concentration of PAHs and TAL metals reported in shallow soil at each unit.

The Phase I and II results are summarized by unit as follows.

Unit 1, North Pavement Edge

VOCs, SVOCs, PAHs, petroleum hydrocarbons, and TAL metals at concentrations above background were reported in shallow-soil samples at Unit 1. While VOC concentrations less than 54 μg/kg and TAL metal concentrations above background were reported throughout the 0- to 10-foot bgs soil interval, SVOC, PAH, and petroleum hydrocarbon concentrations generally decreased with depth throughout the same soil interval.

Unit 3, New East Pavement Edge

VOCs, SVOCs, PAHs, pesticides, petroleum hydrocarbons, and TAL metals at concentrations above background were reported in shallow soil throughout Unit 3. While VOCs and SVOCs above detection limits and TAL metals above background were reported throughout the 0- to 10-foot bgs soil interval, no PAH or petroleum hydrocarbon was reported above detection limits below a depth of 6.75 feet bgs. The highest diesel and motor oil concentrations, ranging from 150 to 2,300 mg/kg, were reported in samples collected from a depth of 6 to 6.75 feet bgs in the south end of Unit 3.

Unit 4, Drainage Ditch

VOCs, PAHs, petroleum hydrocarbons, and pesticides were reported above detection limits in shallow-soil samples at Unit 4. TAL metals at concentrations above background levels were distributed in soil samples collected throughout the 0- to 10-foot-bgs shallow-soil interval. With the exception of toluene, VOC, PAH, pesticide, and petroleum hydrocarbon constituents were not reported above detection limits in samples collected from depths greater than 2 feet bgs.

Table 5-1
Chemicals Reported in Soil at Site 7

Analyte Name	Number of Samples	Number of Detections	Maximum Concentration (mg/kg)	Station ID/Depth (feet bgs)
Volatile Organic Compounds				
1,1,1-trichloroethane	101	3	0.0015	07B403/0 – 1
Acetone	34	14	0.064	07_GN1/0
Benzene	101	1	0.009	07_ST2/0
Carbon tetrachloride	101	2	0.002	07_STDB/0
Chloroform	101	10	0.0054	07B104/6 – 6.75
Chloromethane	101	1	0.044	07B313/2 – 2.75
Ethylbenzene	101	1	0.0025	07B303/2 – 2.75
Methylene chloride	67	29	0.072	07B307/2 – 2.75
Tetrachloroethene	67	11	0.013	07B308/6 – 6.75
Toluene	67	43	0.014	07_GN3/0; 07_DD1/0
Xylene (total)	34	1	0.003	07B307/9.25 – 10
o-xylene	67	13	0.004	07B105/2 – 2.75; 07B311/5.25 – 6
m,p-xylene	67	17	0.010	07B307/9.25 – 10
Petroleum Hydrocarbons				
Diesel	130	32	686	07_ST2/0
Gasoline	46	10	2.68	07_ST2/0
TRPH	35	12	32,091[a]	07_GN1/0
Motor oil	94	34	3,800	07B105/0.5 – 1
Semivolatile Organic Compounds				
Benzoic acid	84	7	0.067	07B314/6 – 6.75
Carbazole	118	10	0.7	07B103/0.75 – 1.25
Phenol	118	2	0.08	07B103/2 – 2.75
bis(2-ethylhexyl)phthalate	118	70	1.4	07_GN1/0
Butylbenzyl phthalate	118	8	0.22	07B102/0.75 – 1.5
Diethyl phthalate	118	1	0.24	07_GN2/2
di-n-butyl phthalate	118	11	0.049	07B102/0.75 – 1.5
di-n-octyl phthalate	118	4	0.083	07B303/2 – 2.75
Polynuclear Aromatic Hydrocarbons[b]				
Anthracene	128	8	0.180	07B102/0.75 – 1.5
Benz(a)anthracene	128	33	2.8	07B103/0.75 – 1.25
Benzo(a)pyrene	128	41	4.0	07B103/0.75 – 1.25
Benzo(b)fluoranthene	128	41	5.4	07B103/0.75 – 1.25

(table continues)

Table 5-1 (continued)

Analyte Name	Number of Samples	Number of Detections	Maximum Concentration (mg/kg)	Station ID/Depth (feet bgs)
Benzo(g,h,i)perylene	128	47	6.9	07_GN1/0
Benzo(k)fluoranthene	128	36	5.4	D7B103/0.75 – 1.25
Chrysene	128	41	3.9	07B103/0.75 – 1.25
Dibenz(a,h)anthracene	128	35	3.8	07B305/2 – 2.75
Fluoranthene	128	41	7.0	07B103/0.75 – 1.25
Fluorene	128	5	0.13	07B103/0.75 – 1.25
Indeno(1,2,3-c,d)pyrene	128	47	2.1	07B103/0.75 – 1.25
Phenanthrene	128	30	3.1	07B103/0.75 – 1.25
Pyrene	128	45	7.0	07B103/0.75 – 1.25
Pesticides				
4,4′-DDD	134	12	0.163	07_ST1/0
4,4′-DDE	134	19	0.31	07B314/2 – 2.75
4,4′-DDT	134	25	0.69	07B314/2 – 2.75
Dieldrin	134	2	0.0253	07_GN1/0
Endosulfan I	134	1	0.0015	07B401/0 – 1
Endosulfan sulfate	134	3	0.0669	07_GN1/0
Endrin	134	1	0.0065	07_GN1/0
Endrin ketone	134	5	0.018	07B102/0.75 – 1.5
gamma-chlordane	134	1	0.018	07B102/0.75 – 1.5
Methoxychlor	134	4	0.069	07B103/0.75 – 1.25
TAL Metals				
Aluminum	138	138	23,700	07B402/8 – 10
Antimony	138	9	3.3	07_DBMW70/10
Arsenic	138	130	9.4	07B101/0 – 0.5
Barium	138	137	2,270	07B103/0.75 – 1.25
Beryllium	138	111	0.96	07_DBMW70/10
Cadmium	138	132	6	07_STDB/0
Chromium	138	138	68.5	07B309/2 – 2.75
Cobalt	138	138	9.5	07_DBMW70/5
Copper	138	135	2,110	07B105/0.5 – 1
Lead	138	138	931	07_GN1/0
Manganese	138	138	423	07_DBMW70/5
Mercury	138	9	0.67	07B302/9.25 – 10
Nickel	138	138	142	07B101/4.75 – 5.5
Selenium	138	33	1.8	07B310/2 – 2.75

(table continues)

Table 5-1 (continued)

Analyte Name	Number of Samples	Number of Detections	Maximum Concentration (mg/kg)	Station ID/Depth (feet bgs)
Silver	138	27	2.3	07B310/2 – 2.75
Thallium	138	95	2.4	07B310/2 – 2.75
Vanadium	138	138	69.1	07B401/5 – 7
Zinc	138	138	1,810	07B101/4.75 – 5.5

Notes:
[a] soil sample collected below this sample at 2 feet bgs reported a TRPH concentration of 1,007 mg/kg.
[b] the number of detections for polynuclear aromatic hydrocarbons is based on the higher of the detections from the polynuclear aromatic hydrocarbon and semivolatile organic compound analyses when both analyses were conducted on a single sample

Acronyms/Abbreviations:
bgs – below ground surface
DDD – dichlorodiphenyldichloroethane
DDE – dichlorodiphenyldichloroethene
DDT – dichlorodiphenyltrichloroethane
mg/kg – milligrams per kilogram
TAL – target analyte list
TRPH – total recoverable petroleum hydrocarbons

Unit 5, Open Dirt Area

VOCs, SVOCs, PAHs, pesticides, petroleum hydrocarbons, and TAL metals with concentrations above background were reported in shallow-soil samples at Unit 5. SVOCs and PAHs were predominately identified in samples collected from one boring in the northwest corner of Unit 5. VOCs were reported sporadically at relatively low concentrations. Pesticides, SVOCs, and PAHs were not reported above detection limits in soil samples from depths greater than 2 feet bgs. TAL metals above background were present through the shallow-soil interval but were predominately identified in samples collected from the upper 5 feet bgs, with the highest concentrations and reporting frequency in surface samples.

During the Phase I RI, a concentration of 32,091 mg/kg of TRPH was reported in the soil sample collected at 0 feet bgs at boring location 07_GN1 in Unit 5. Chemical analyses of this soil sample also reported concentrations of five SVOCs above 0.73 mg/kg and concentrations of 426 mg/kg of TPH as diesel and 0.089 mg/kg of TPH as gasoline. The only VOCs reported in this soil sample were toluene and acetone both reported below a concentration of 0.065 mg/kg. The chemical analyses of the soil sample collected below this sample at 2 feet bgs reported a concentration of 1,007 mg/kg of TRPH and concentrations of SVOCs, VOCs, TPH as gasoline, and TPH as diesel below the reported detection limits for these compounds. During the Phase II RI, visual observations around the area of this sample suggested that a large surface release had not occurred in this area.

Although the results of the chemical analyses of soil samples collected from boring location 07_GN1 do not indicate that contamination represents a threat to groundwater present at approximately 120 feet bgs at this location, the RWQCB has requested further evaluation of the petroleum hydrocarbons at this sample location. Therefore, the DON will conduct further investigation under the MCAS El Toro Petroleum Release Corrective Action Program. This investigation does not impact the no action status of this site under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA).

5.3 SITE 14, BATTERY ACID DISPOSAL AREA

Site 14 is located approximately 50 feet southwest of Building 245 at the western edge of MCAS El Toro (Figure 5-6). The site is currently an unmaintained vegetated area. It is relatively level and lies at an elevation of about 270 feet above MSL. The approximate site area is 600 square feet. Building 245 was a heavy equipment maintenance shop that is currently empty, and Site 14 is inactive. An asphalt parking area extends from Building 245 south to the edge of Site 14. Surface drainage in this parking area is to the south along the pavement to its edge, then down a slight embankment to a drainage ditch. The ditch extends west to a culvert that drains to Marshburn Channel. A catch basin near the drainage ditch was sampled during the Phase I RI and found to receive no surface-water runoff from the Battery Acid Disposal Area (JEG 1993a).

5.3.1 Geology and Hydrogeology

The Phase I RI boring logs show that the subsurface lithology at Site 14 consists of moderately to well-graded clayey to silty sand that is interbedded with sandy silt and clay. Soil in the area of Site 14 is classified as Sorrento loam. Sorrento loam soils are generally well-drained alluvial fan and floodplain sediments in areas nearly level to moderately sloping. This soil type is moderately well drained with a percolation rate of 2 to 6 inches per hour in the upper 1 foot. Runoff is regarded as slow, and the erosion hazard is slight for the Sorrento loams (Wachtell 1978). Surface drainage at Site 14 is conveyed to a storm drain that flows into Marshburn Channel.

On the basis of the boring log and gauging data collected from monitoring well 14_DBMW50 (CDM 1997), the shallow groundwater unit is assumed to be present at a depth of approximately 115 feet bgs in the area of Site 14, and the groundwater flow is assumed to be generally to the west-northwest.

5.3.2 Site History

Site 14 consists of Unit 1, a battery acid disposal area associated with Building 245, and a separate catch basin. From 1977 through 1983, fluids from facility vehicle batteries, paints, and associated paint wastes were drained onto the unpaved ground surface beyond the edge of the parking area. Also, when the asphalt parking area was washed down, contaminated surface water runoff drained over the edge of the pavement onto an unpaved area. This unpaved area sloped to a culvert that drains to Marshburn Channel.

N

SOURCE: AERIAL PHOTOBANK, INC.
SAN DIEGO, CALIFORNIA
DATE: 1/12/96

Record of Decision

Figure 5-6

Site Aerial Photograph (1/12/96)
Site 14 - Battery Acid Disposal Area

MCAS, El Toro, California

Bechtel National, Inc.
CLEAN II Program

Date:	11/14/00
File No:	164E5748
Job No:	22214-164
Rev No:	B

A separate catch basin near the battery acid disposal area was also investigated. The volume of battery acid (sulfuric acid) disposed at the site is estimated at 210 gallons. Other suspected contaminants included lead, other priority pollutant metals, waste oils, and solvents from paint products and paint strippers (JEG 1993b).

5.3.3 Site Investigations

Investigations conducted at Site 14 included a Phase I RI conducted in 1993, two aerial photographic surveys, and employee interviews. Phase II RI sampling was not conducted at Site 14 because adequate data had been collected during the Phase I RI to evaluate the site and conduct the HHRA.

5.3.3.1 PHASE I REMEDIAL INVESTIGATION

During the Phase I RI, 13 shallow-soil samples were collected at depths of 0 to 4 feet bgs from six borings at Site 14. In addition, three shallow-soil samples and nine deeper (greater than 10 feet bgs) soil samples were collected from two borings completed as monitoring wells. One sediment sample was also collected from the catch basin approximately 20 feet northwest of Site 14.

Because the two monitoring wells are outside the Site 14 boundary, the results of soil sampling at these locations are not discussed further in this ROD. Although the catch basin is also outside the site boundary, it is associated through fate and transport of contaminants; therefore, soil sampling, analyses, and results from the basin are discussed in the ROD. Also, since the contamination at Site 14 was determined to be limited to the shallow soil interval and the site is not the source of the VOC-contaminated groundwater at El Toro, Phase I groundwater results are not discussed further in this ROD.

Phase I soil samples and the sediment sample were analyzed by a fixed-base laboratory for VOCs, SVOCs, TPH, TRPH, and TAL metals. Results of the Phase I shallow-soil samples are shown in Table 5-2 and summarized as follows.

- Low concentrations (less than 67 μg/kg) of VOCs were reported in shallow soil at all sampling locations and in the catch basin sediment sample.
- One or more SVOCs (including PAHs) were reported in shallow soil at five of six soil sampling locations and in the catch basin sediment sample.
- Diesel and/or gasoline were reported in shallow soil at all soil sampling locations and in the catch basin sediment sample.
- Fourteen of 18 TAL metals (excluding essential nutrient metals calcium, iron, magnesium, potassium, and sodium) were reported at concentrations above the 95th percentile of their respective background values in shallow soil.

Table 5-2
Chemicals Reported in Soil at Site 14

Analyte Name[a]	Number of Samples	Number of Detections[b]	Maximum Concentration (mg/kg)	Station ID/Depth (feet bgs)
Volatile Organic Compounds				
Acetone	14	6	0.066 **[c]	14_GN5/0
Carbon tetrachloride	14	1	0.002 J	14_DD3/0
Toluene	14	6	0.006 J	14_DD4/0
Semivolatile Organic Compounds				
Anthracene	14	2	0.24 J	14_GN2/0
Benz(a)anthracene	14	5	2.20	14_GN2/0
Benzo(a)pyrene	14	6	3.10	14_GN2/0
Benzo(b)fluoranthene	14	6	3.80	14_GN2/0
Benzo(g,h,i)perylene	14	3	1.30	14_GN2/0
Benzo(k)fluoranthene	14	6	3.10	14_GN2/0
bis(2-ethylhexyl)phthalate	14	4	7.40	14_CBBE[d]
Carbazole	14	3	0.87	14_GN2/0
Chrysene	14	6	3.60	14_GN2/0
Dibenz(a,h)anthracene	14	2	0.64	14_GN2/0
Fluoranthene	14	7	5.80	14_GN2/0
Indeno(1,2,3-c,d)pyrene	14	7	1.50	14_GN2/0
Phenanthrene	14	6	1.60	14_GN2/0
Pyrene	14	7	4.70	14_GN2/0
Petroleum Hydrocarbons				
TRPH (U.S. EPA Method 418.1)	14	8	7,364	14_CBBE[d]
Diesel (CA LUFT/SW)	14	7	11,100	14_CBBE[d]
Gasoline (CA LUFT/SW)	14	11	1.64	14_DD4/0
TAL Metals				
Aluminum	14	14	21,700	14_DD3/2
Antimony	14	3	4.2 b[e]	14_GN/0
Arsenic	14	13	6.3	14_GN/0
Barium	14	14	303	14_GN5/0
Beryllium	14	3	0.75 b[e]	14_DD3/2
Cadmium	14	11	7.2	14_GN5/0
Chromium	14	14	38.4	14_GN2/0
Cobalt	14	14	8.7 b[e]	14_DD6/2
Copper	14	14	30.8	14_GN5/0
Lead	14	14	923	14_GN5/0
Manganese	14	14	366	14_DD3/2
Mercury	14	2	1.4	14_CBBE[d]
Nickel	14	14	14.7	14_DD3/2

(table continues)

Table 5-2 (continued)

Analyte Name[a]	Number of Samples	Number of Detections[b]	Maximum Concentration (mg/kg)	Station ID/Depth (feet bgs)
Selenium	14	10	0.48 b[c]	14_GN5/0
Silver	14	4	5.6	14_DD6/0
Thallium	14	14	0.18 b[c]	14_DD4/4
Vanadium	14	14	62	14_DD6/2
Zinc	14	14	288	14_GN5/0

Notes:
[a] all chemicals were reported in soil except where noted
[b] as reported by analytical laboratory
[c] observed in field blanks at the same order of magnitude
[d] catch basin sediment sample
[e] reported value is less than the contract-required detection limit but greater than or equal to the instrument detection limit mg/kg

Acronyms/Abbreviations:
** – estimated value
bgs – below ground surface
CA LUFT/SW – California Leaking Underground Fuel Tank/Solid Waste
J – estimated value
mg/kg – *milligrams per kilogram*
TAL – Target Analyte List
TRPH – total recoverable petroleum hydrocarbons
U.S. EPA – United States Environmental Protection Agency

Although VOCs, SVOCs and PAHs, petroleum hydrocarbons, and TAL metals above background were reported in shallow soil throughout Site 14 and in the catch basin sediment sample, the Phase I sampling and analysis indicated that these chemicals are generally limited to the upper 2 feet of soil. The highest concentrations of SVOCs were reported at the ground surface. SVOCs were also reported in a sample taken from the same boring at 2 feet bgs; however, the concentrations were lower by an order of magnitude.

Phase I RI analytical results for deeper subsurface (more than 10 feet bgs) soil samples indicated that the types and concentrations of analytes present do not pose a threat to groundwater at Site 14. Therefore, in accordance with the Work Plan procedures and with the concurrence of the BCT, conditions within the deeper subsurface soil interval and groundwater were not investigated further during the RI.

The HHRA performed during the RI (Section 7) showed PAHs and TAL metals above background were the predominant risk drivers at Site 14. Figures 5-7 and 5-8 show the location and concentration of PAHs and TAL metals reported in shallow soil at Unit 1 and the catch basin.

5.3.3.2 SCIENCE APPLICATIONS INTERNATIONAL CORPORATION AERIAL PHOTOGRAPH SURVEY

The SAIC aerial photograph survey noted a large open storage area, possibly containing drums, on the southwestern side of Building 246 (southwest of Building 245). Stained soil was observed on the southeastern side of Building 246 in the 1946 photograph and on the eastern end of Building 246 in the 1955 photograph. Battery acid disposal activities did not start until 1977, so the observed stains are not related to Site 14 activities (SAIC 1993).

5.3.3.3 EMPLOYEE INTERVIEWS

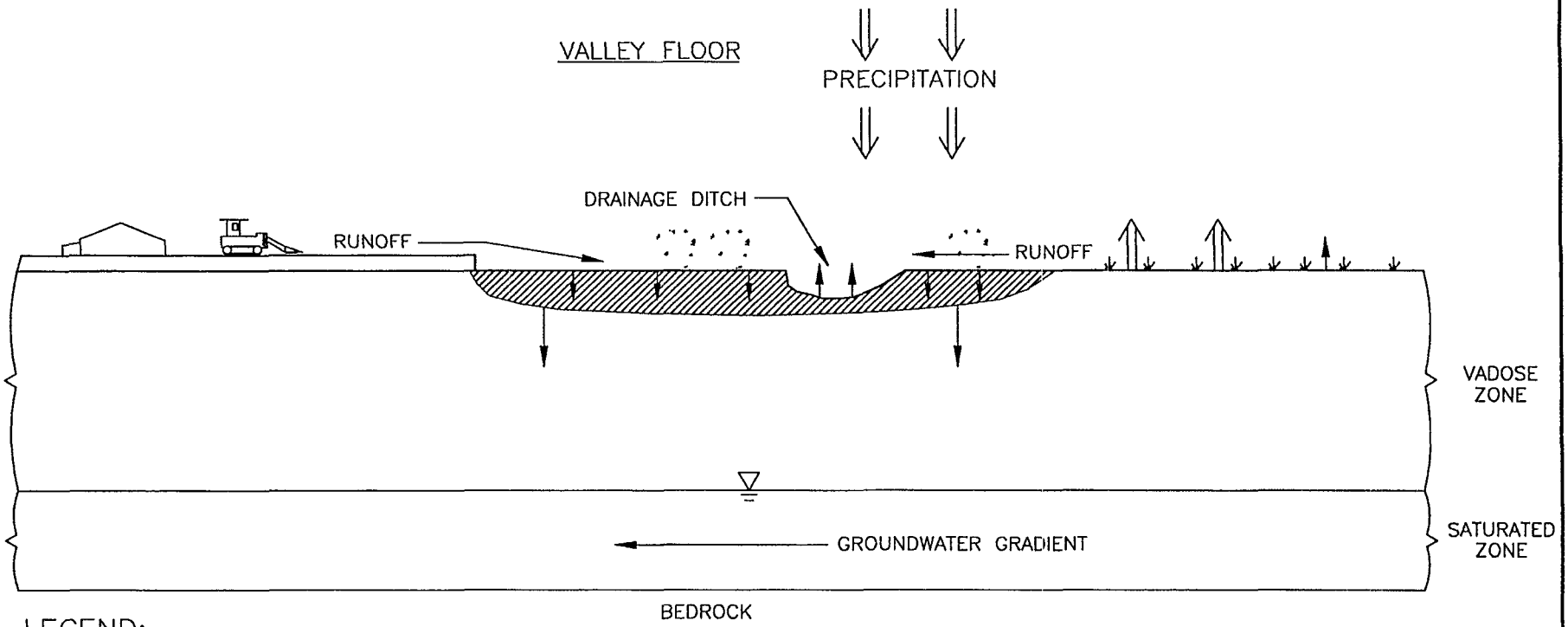
At the 26 May 1994 employee interviews, the interviewees indicated that they did not know why this site would be a source of carbon tetrachloride in the groundwater, and they confirmed that solvents were used in Building 245 (the former Heavy Duty Maintenance Shop) (JEG 1994c).

5.4 POTENTIAL MIGRATION PATHWAYS

The potential migration pathways at Sites 7 and 14 include transport by air or surface-water runoff (Figure 5-9). Contaminants in surface soil can also be leached downward through the soil profile by way of surface-water infiltration. However, because of the minimal extent of contamination at Sites 7 and 14, the low mobility of the contaminants, and the low net infiltration rate, transport of contaminants through soil to groundwater is expected to be negligible. This is supported by analytical results that indicate that contamination is limited to shallow soil at both sites.

Atmospheric transport is considered a viable transport mechanism at Sites 7 and 14. Airborne contaminants can be transported in association with fugitive dust or by volatilization directly to the air. Transportation of airborne contaminants through volatilization is expected to be negligible. Eleven VOCs were reported at low concentrations (less than 73 μg/kg) in surface and shallow-soil samples at Site 7. Three VOCs were reported at low concentrations (less than 67 μg/kg) at Site 14. The low concentrations that could be transported through air are not expected to affect air quality on- or off-site because the soil concentrations would be reduced by the gradual release of the VOCs to the air and by atmospheric dispersion and mixing. Therefore, because of the low concentrations, atmospheric transport by vapor phase is not thought to be significant at the site.

Fairly constant low to moderate winds and generally dry climatic conditions are conducive to the formation of dust and can result in transport of surface-soil contaminants that are adsorbed to soil particles. Contaminants detected in sediment and surface-soil samples at Sites 7 and 14 included SVOCs and metals.



LEGEND:

RECEPTORS:

- WORKERS
- GRASS, BRUSH HABITATS
- BASE BUILDINGS

PATHWAYS:

- PRECIPITATION
- EVAPOTRANSPIRATION
- GROUNDWATER
- CONTAMINANTS
- VAPOR EMISSIONS
- LEACHING
- DUST

NOT TO SCALE

Record of Decision
Figure 5-9
Conceptual Site Model
OU-3B No Action Sites 7 and 14

MCAS, El Toro, California

Bechtel National, Inc.
CLEAN II Program

Date: 11/14/00
File No: 164A5751
Job No: 22214-164
Rev No: C

Contaminants in sediment and surface soil may be carried into the atmosphere by wind. The amount of atmospheric transport is based on the erosion potential of the surface, particle size, and wind speed. In addition, dispersion in the atmosphere dilutes particle concentrations as the dust moves off-site.

The presence of grass cover, asphalt or concrete surfaces, or compacted soil at Sites 7 and 14 tends to minimize wind erosion, reducing the potential for the release of contaminants through air as contaminated dust. In the relatively small areas of the site where soil is exposed, the soils are generally firmly compacted and are not readily available for transport as fugitive dust.

Waterborne contaminants can be transported in association with suspended particulates or as solutes or colloids in the surface-water runoff. Surface-water transport is affected by the amount of rainfall, type of contaminant, surface properties, and area topography. The surface-water transport pathway allows movement of contaminants off-site to the surrounding area.

Surface-water transport is considered a viable transport pathway where surface soil is exposed at Sites 7 and 14. However, this form of transport is expected to have minimal impact because runoff occurs only during significant storm events, which are infrequent. Overland flow is generally in the form of sheet flow with temporary localized ponding. In addition, because of the fairly stable surface conditions, minimal contaminated soil is available for transport. Thus, because of the existing stabilized-soil surface conditions and the prevailing climatic conditions, transport of contaminated soils from Sites 7 and 14 by way of surface water is expected to be minimal.

Section 6

CURRENT AND POTENTIAL FUTURE SITE AND RESOURCE USES

This section contains a description of the current and potential future use of land, groundwater, and surface water at MCAS El Toro.

6.1 LAND USES

MCAS El Toro is bordered on the south and west by the city of Irvine and on the north and east by unincorporated lands. The city of Irvine controls development in surrounding areas that are suitable for urbanization. However, local jurisdictions do not have authority over federal lands.

Historically, land use around MCAS El Toro has been largely agricultural. However, the land to the south, southeast, and southwest has been developed over the past 10 years for commercial, light-industrial, and residential uses. Currently, expanding commercial areas are located adjacent to the Station. Additional residential areas are located to the northwest and west of the Station. Adjacent land to the northeast and northwest is used for agriculture.

Growth projections through 2020 for the area surrounding the Station indicated continued urbanization. The estimated population in the city of Irvine in 2000 was 132,300. Population projections indicate further increases to 160,000 by 2010 and over 180,000 by 2020. Population growth has occurred primarily in the central residential districts within 2 to 3 miles of the Station.

MCAS El Toro encompasses about 4,738 acres. Approximately 1,000 acres are designated for outleases that are not available for development because airfield safety clearances render them unsuitable for any other use. The outleased lands are at the corners of the Station and are used for agricultural purposes, including landscape nurseries, livestock grazing, and crop production.

MCAS El Toro provided materials and support for aviation activities of the United States Marine Corps until base closure in July 1999. Environmental compliance and restoration activities continue after base closure, and a caretaker staff will remain at the Station until property transfer is complete. During operations, land use on MCAS El Toro consisted of a few general types. General Station land uses are described for the following four quadrants, as defined by the bisecting north-south and east-west runways.

- The northwest quadrant consisted of administrative services (including the MCAS El Toro headquarters, family and bachelor housing, and community support services).
- The northeast quadrant consisted of Marine Aircraft Group activities (including training, maintenance, supply and storage, and airfield operations), family housing, community services, and ordnance storage in areas isolated by topographic relief and distance from other developments.
- The southeast quadrant consisted of administrative services, maintenance facilities, ordnance storage, and the golf course.

- The southwest quadrant consisted of aircraft maintenance facilities, supply and storage facilities, and limited administrative services.

Sites 7 and 14 are located in the western portion of MCAS El Toro. Site 7 was historically used for aircraft drop tank storage and drainage. Site 14 was used as a battery acid disposal area. Both sites are not currently in use.

MCAS El Toro was closed on 02 July 1999. A Community Reuse Plan was prepared and submitted to the DON in 1996 (P&D Consultants Team 1996). The reuse plan proposes to use MCAS El Toro for a commercial airport and several public uses including education, parks, wildlife areas, golf courses, homeless services, and commercial/light-industrial uses. The 1996 plan was refined by the 1999 Airport System Master Plan, which incorporated airport planning activities that resulted in some land use areas being redefined. The Navy and the Federal Aviation Administration are evaluating this proposed reuse of MCAS El Toro and other alternatives in their joint environmental impact statement (DON 2000). The proposed reuse for Sites 7 and 14 is industrial (airfield).

6.2 GROUNDWATER USES

MCAS El Toro lies within the Irvine Forebay I Groundwater Subbasin (Irvine Subbasin), which has been designated by the RWQCB Santa Ana Region as a public water supply source (RWQCB 1995). The regional aquifer beneath MCAS El Toro is not currently a source of municipal drinking water; however, groundwater in the vicinity of the Station is used for agricultural purposes. One on-Station groundwater well that belongs to the Irvine Company, located at the westernmost end of the east-west runway, is used for irrigation and is connected to the regional irrigation distribution system. Other wells pumping irrigation water are located west (three wells) and northwest (four wells) of the Station. The closest agricultural well is 18_TIC111, which is adjacent to the northwest Station boundary. To the west, the nearest well is 18_TIC047, which is located approximately 2,600 feet west of the Station boundary.

Water within the Irvine Subbasin currently contains high concentrations of total dissolved solids and nitrates that make it unsuitable for drinking water purposes. Orange County Water District (OCWD) and Irvine Ranch Water District have initiated the Irvine Desalter Project to intercept, contain, and treat this groundwater to make it suitable to use for domestic or recycled water purposes.

6.3 SURFACE-WATER USES

Surface drainage near MCAS El Toro generally flows southwest, following the slope of the land and perpendicular to the trend of the Santa Ana Mountains. Several washes originate in the hills northeast of MCAS El Toro and flow through or adjacent to the Station en route to San Diego Creek. Off-Station drainage from the hills and upgradient irrigated farmlands combines with Station runoff at MCAS El Toro (generated from the extensive paved surfaces) and flows into four major drainage channels: Borrego Canyon

Wash, Agua Chinon Wash, Bee Canyon Wash, and Marshburn Channel. IRP Site 25 comprises these on-Station drainages.

The southernmost wash is Borrego Canyon Wash, which flows along the southeast boundary of MCAS El Toro. The wash is unlined in the Santa Ana Mountains; downstream of Irvine Boulevard, it is lined. Borrego Canyon Wash crosses the southern corner of the Station and joins Agua Chinon Wash about 1/4 mile downstream of the Station boundary.

Both the Agua Chinon and the Bee Canyon Washes cross the central portion of MCAS El Toro and receive on-Station runoff mainly through storm sewers. These washes are contained in culverts through most of their pathways across the Station. Both washes are unlined along several hundred feet at the southwest edge of the Station and are lined and culverted downstream of the Station. Agua Chinon Wash flows into San Diego Creek just east of the intersection of the San Diego and Laguna Beach Freeways, about 1 mile downstream of its confluence with Borrego Canyon Wash. Bee Canyon Wash flows into San Diego Creek just northeast of the same intersection, about 1,500 feet north of Agua Chinon Wash.

Marshburn Channel is a lined drainage channel that runs along the northwestern boundary of MCAS El Toro. The channel receives runoff from upstream agricultural fields and from the western part of the Station and discharges into San Diego Creek about 3/4 mile northwest of Bee Canyon Wash.

Southwest of MCAS El Toro, the San Diego Creek flows through commercial and agricultural areas. Approximately 5 miles downstream of the Station, the creek runs through a recreational area that includes hiking and bicycle paths. The creek flows into Upper Newport Bay about 7 miles downstream of its intersection with the Marshburn Channel. Recreational uses of the bay include swimming and fishing. Upper Newport Bay is an ecological preserve used by migratory birds (BNI 1995a).

There is currently no plan to modify the surface-water drainage or surface-water uses at MCAS El Toro.

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Section 7
SUMMARY OF SITE RISKS

HHRAs were conducted for Sites 7 and 14 using data collected during the RI. The objective of the risk assessments was to evaluate whether exposure to chemicals found in soil and/or groundwater poses a threat to human health if no action is taken. The human-health evaluation methodology is provided in the final RI for Sites 7 and 14 (BNI 2000) and summarized below. An ecological risk assessment was not performed for Sites 7 and 14 because a habitat assessment performed in May 1995 indicated an absence of significant plant and wildlife habitat at these sites.

7.1 IDENTIFICATION OF CHEMICALS OF POTENTIAL CONCERN

The procedures used to identify the chemicals of potential concern (COPCs) to be evaluated in the risk assessment are consistent with the U.S. EPA's Risk Assessment Guidance for Superfund (U.S. EPA 1989) and Interim Final Guidance for Data Usability in Risk Assessment (U.S. EPA 1990). Surface-soil data (0 to 2 feet bgs) and shallow-soil data (0 to 10 feet bgs) were used to select COPCs in the baseline HHRA. Exposure to groundwater was not included because the RI indicated that site-related contamination is present only in the shallow-soil interval and does not extend to groundwater at the site. Human-health risks associated with groundwater are addressed in the evaluation of Site 24.

At Site 7, the HHRA addressed each of the units (Units 1, 3, 4, and 5) as a separate area of potential concern so that remedial actions, if needed, could be developed for localized remediation targets. Phase I and II RI data were combined to conduct the baseline HHRA. At Site 14, Phase I RI surface-soil data (0 to 2 feet bgs) and shallow-soil data (0 to 4 feet bgs) were used to select COPCs in the baseline HHRA for Unit 1. (Phase II RI data were not collected at Site 14.) At the Site 14 catch basin, represented by a single sampling event, the collected sample consisted of dry sediments. However, these sediments are considered to have the same properties as the surrounding surface soil. Therefore, for the HHRA, the dry sediment sample was referred to and evaluated as a soil sample.

Before COPCs were selected for inclusion in the risk assessment, all chemical analytical data obtained during the Site 7 Phase II RI field activities were validated (BNI 1999b). Phase I data for Sites 7 and 14 were used "as is" (they were not revalidated). The data were evaluated for the data quality indicators (precision, accuracy, representativeness, comparability, and completeness) as specified in the *Guidance for Data Usability in Risk Assessment* (U.S. EPA 1992). Data rejected during the validation process were not used in the baseline HHRA. All soil data used in the risk assessment were analyzed by a fixed-base analytical laboratory.

Following the validation process, COPCs were selected on the basis of appropriate U.S. EPA guidance (U.S. EPA 1989). The data evaluation process started with listing all chemicals positively identified in soil samples (see Tables 5-1 and 5-2 of this document). If the COPCs in the soil were depth related, each list was limited to chemicals found within the depth of concern. The procedure eliminated the chemicals that were unlikely to pose a risk to human health, which were:

- naturally occurring inorganic chemicals (metals) for which the concentrations were within the range considered background for the area around the site and
- essential nutritional elements of low toxicity (i.e., calcium, iron, magnesium, potassium, or sodium) present at low concentrations.

During the Phase II RI for the OU-3A Sites 4, 6, 8 through 13, and 15 and OU-3B Site 16, conducted from 1995 through 1997, soil samples were collected from borings at four sites to estimate the relative contribution of hexavalent chromium to the total chromium concentrations reported for these sites. The analytical results did not identify hexavalent chromium in any of these soil samples. Therefore, for the purposes of evaluating data during the Phase II RI for risk assessment, contamination fate and transport, and nature and extent of contamination, chromium was assumed to be present only in its trivalent state (BNI 1997b).

7.2 EXPOSURE ASSESSMENT

An exposure assessment identifies the populations at potential risk and the mechanisms by which members of those populations could be exposed to the COPCs in each medium. It is also a process by which the chemical concentrations at the point of exposure and the chemical doses are calculated.

7.2.1 Exposure Scenarios

Because MCAS El Toro is a closed facility, the exposure assessment focused on people who might be exposed while living, working, or playing directly on each site. Exposure of people who live, work, or play in communities surrounding MCAS El Toro is possible through movement of chemical vapors and contaminated dust from the Station to off-Station areas. However, even if no mitigating action is taken, those people, being much farther from the sites, will receive less exposure than those who will eventually be spending much of the day on-site.

MCAS El Toro future land use is expected to be predominantly industrial. A Reuse Plan for the Station has been developed that calls for overall use as an airport (DON 2000, P&D Consultants Team 1996). Sites 7 and 14 have been designated for industrial (airfield) use. To provide risk managers with the information necessary to make an appropriate potential cleanup decision, risk estimates were calculated for both a residential land-use scenario and an industrial land-use scenario at the sites. Individuals engaged in construction work were also evaluated for selection as representative receptors.

Under the residential scenario, the resident is assumed to be a person who lives in a house on-site from birth to age 30. (Thirty years is the 90th percentile of time that people in the United States live at one address [U.S. EPA 1989].) It is further assumed that the person never leaves the property except when on vacation, which occurs once a year for 2 weeks, and that, beginning at age 7, the person spends 2 days a week outdoors and thus handles soil. COPCs in soil to 10 feet bgs are treated as available to the resident, because soil

would be excavated to 10 feet for basement and swimming pool construction, and some of the soil from the subsurface may be left on the surface.

The construction worker is potentially exposed to the same 0- to 10-foot-bgs shallow-soil interval as the on-site resident. Long-term exposure for residents at the site is assessed as being greater than exposure for someone performing construction work over a short time. Construction work would be infrequent, and its duration is assumed to be 1 year or less. Further, excavation activities would be covered by regulations promulgated by the California Occupational Safety and Health Administration, and incidental exposure to chemicals in the soil is unlikely. Therefore, risk to the hypothetical construction worker was estimated to be at least 25 times less than the risk to the resident adult.

Under the industrial scenario, the worker is assumed to be present at the site 8 hours a day, 5 days a week, and 50 weeks a year for 25 years. COPCs in soil to 2 feet bgs are treated as being available to the worker.

7.2.2 Exposure Pathways

An exposure pathway is the means by which a contaminant moves through the environment form the source to a receptor. Exposure pathways are identified through an analysis of the distribution of the COPCs in the environment and the physical and chemical properties of the COPCs. For a pathway to be complete, all of the following elements must be present: a contaminant source and mechanism for contaminant release, an environmental transport medium, an exposure point, and an exposure route. Exposure pathways are illustrated in Figure 7-1.

Children and adult residents at areas of potential concern as well as office/industrial workers could be exposed to COPCs in the soil by:

- ingestion of impacted soil,
- dermal contact with impacted soil, and
- inhalation of vapors and particulates that have been released from impacted soil.

7.2.3 Exposure-Point Concentration

An exposure-point concentration (EPC) is the concentration of a chemical in the contaminated medium (e.g., soil) at the point of contact with a receptor (e.g., resident). Exposure conditions used in the estimation of risk were chosen to represent what is known as "reasonable maximum exposure." Use of these exposure conditions tends to overestimate risk. This effort to overestimate risk is deliberate; it provides risk managers a margin of safety when making cleanup decisions.

Under reasonable maximum exposure, U.S. EPA specifies using the 95 percent upper confidence limit (UCL) of the average measured chemical concentrations. In calculating the 95 percent UCLs for Sites 7 and 14, the data were tested for normality and lognormality. Sets of data that failed these tests were analyzed using a nonparametric

approach. The maximum concentration was used as the EPC instead of the 95 percent UCLs when:

- the 95 percent UCL of a chemical exceeded its highest measured concentration or
- there were fewer than four concentrations above the limits of detection.

For the resident child and adult (residential scenario), soil concentrations (0 to 10 feet bgs) were used to calculate EPCs. For the industrial worker (industrial scenario), surface soil concentrations (0 to 2 feet bgs) were used in the calculation of EPCs.

EPCs for each unit and depth interval at Sites 7 and 14 are in Appendix I of the draft and final RI Reports for Sites 7 and 14 (BNI 1999b, 2000).

7.2.4 Dose Rate

Dose rate is the amount of chemical to which a receptor is exposed per unit body weight and time. Dose rates were estimated by integrating intake variables, such as ingestion rate, body weight, and exposure duration, with the contaminant concentration. The combination of all intake variables results in an estimate of exposure for each pathway.

The general equation for calculating the dose is shown below.

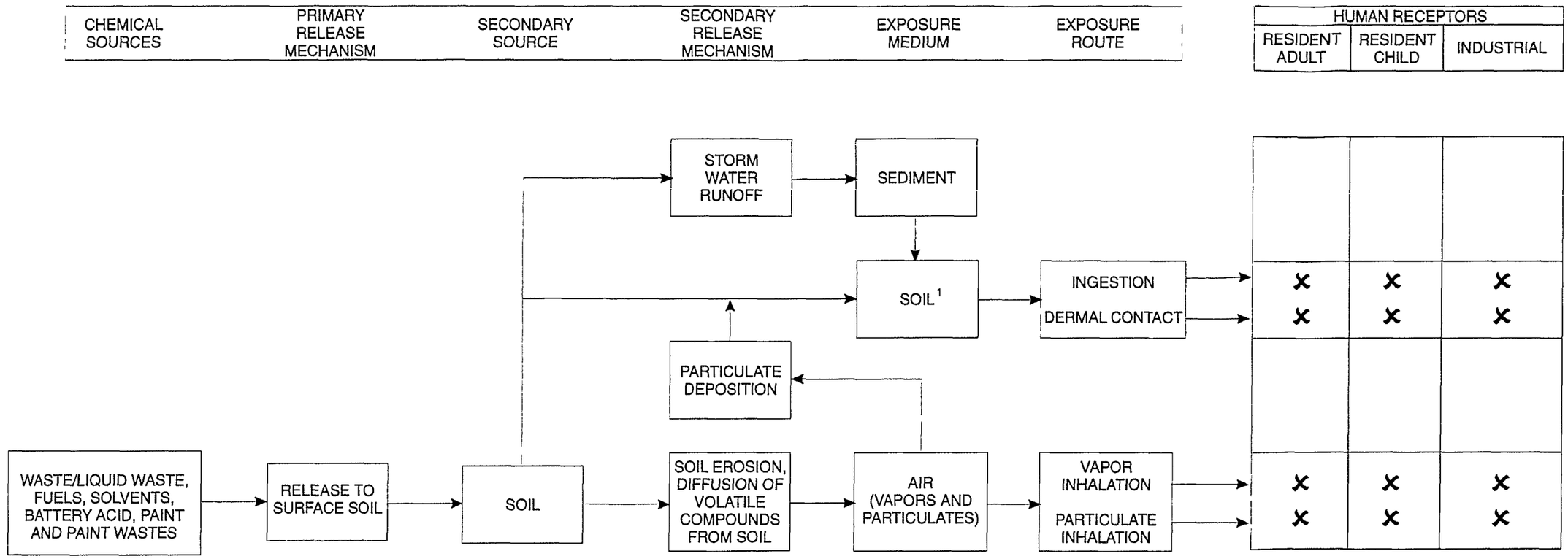
$$D = (C \times CR \times EF \times ED)/(BW \times AT)$$

where:

D = daily dose averaged over the exposure period (milligrams per kilogram per day)
C = chemical concentration in the exposure medium (mg/kg)
CR = contact rate with the exposure medium (kilograms per day)
EF = exposure frequency (days per year)
ED = exposure duration (year)
BW = body weight of the exposed individual (kilograms)
AT = averaging time (day)

The exposure assumptions for the adults and children exposed to soil at Sites 7 and 14 include the following standard U.S. EPA default assumptions.

- One hundred milligrams a day was assumed for a 70-kilogram adult and 200 milligrams a day for a 15-kilogram child (age 1 to 6 years), 350 days a year.
- For dermal exposure, over 25 percent of the resident's skin is in contact with soil for 100 days a year.
- Inhalation of soil particulates and gases is assumed to occur 24 hours a day, 350 days a year.
- Adult exposure is assumed for a total of 30 years, 6 years as a child and 24 years as an adult. (Child exposure was assumed to be 6 years.)



LEGEND

1 EVALUATED BY AREA OF POTENTIAL CONCERN

Record of Decision
Figure 7-1
Human Health Exposure Routes and Receptors
OU-3B No Action Sites 7 and 14

MCAS, El Toro, California

Bechtel National, Inc.
CLEAN II Program

Date: 7/26/00
File No. 164C5752
Job No. 22214-164
Rev. No. A

The exposure assumptions for the industrial worker are as follows.

- Work is performed 8 hours a day, 250 days a year.
- For dermal exposure, over 25 percent of the worker's skin is in contact with soil.
- Worker exposure is assumed for a total of 25 years.

7.3 TOXICITY ASSESSMENT

The toxicity assessment identifies toxicity criteria (values) for each of the chemicals chosen for inclusion in the risk assessment and the kinds of effects each of the chemicals can produce. Toxicological chemical effects fall into two categories: those that could potentially cause cancer (carcinogens) and those that cause other types of health effects (e.g., liver damage [noncarcinogens]). Each of the toxicological chemical effects is described by an assigned toxicity factor. These factors are numbers that indicate the toxicity of the chemicals. The toxicity factor for carcinogenic effects is called a cancer slope factor (CSF), and the toxicity factor for noncarcinogenic effects is called a reference dose (RfD).

CSFs are developed by the U.S. EPA using a mathematical model that applies data from the results of human epidemiological studies or chronic animal bioassays to predict potential increases in cancer in humans. The use of animal data to predict cancer in humans represents an uncertainty in risk assessment. To account for the uncertainty in CSF calculations, the U.S. EPA raises the CSF using a safety factor in the form of upper-bound confidence intervals. The upper-bound confidence interval indicates that there is a 95 percent probability that the actual risk will be less than that predicted by the model.

Each RfD is associated with a specific health effect (e.g., central nervous system damage), also referred to as a "toxicity endpoint." The current scientific view assumes that, for noncarginogenic effects, there is a concentration below which there is little potential for adverse health effects over the exposure period. That concentration is referred to as the "threshold concentration." RfDs are derived from either human (occupational exposure) or animal studies and are adjusted using uncertainty factors. The RfD is calculated from the highest chronic (long-term) exposure level that did not cause adverse effects in the population (human or laboratory animal) studied. A safety factor is applied to this level to allow for any uncertainty, such as when data are used on animals to predict effects on humans. These factors range up to 10,000 based on the confidence level associated with the data. The resulting RfD, in units of body weight per day, is used to characterize the risk.

7.4 RISK CHARACTERIZATION

The final step in the risk assessment is the characterization of risk in which the exposure and toxicity information is integrated to evaluate the potential health risks. Cancer and noncancer risk are quantified separately.

7.4.1 Cancer Risk

The equation specified in the U.S. EPA Risk Assessment Guidance for Superfund (U.S. EPA 1989) for estimating cancer risk is:

cancer risk = CSF × estimated dose rate

Cancer risk is an upper-bound estimate of individual excess probability of increased cancer incidence resulting from exposure to a potential carcinogen. The cancer risks presented by different carcinogens are added across all of the exposure pathways and intake routes to obtain an estimate of overall risk.

A cancer risk probability of 1×10^{-6} means that the estimated increase in an individual normal or baseline cancer risk is no greater than 1 in 1 million for a lifetime of exposure, and it may be considerably less. Risks of 10^{-6} or less are considered allowable by the U.S. EPA. Risks between 10^{-6} and 10^{-4} are considered generally allowable and require a risk management decision as to whether remedial action is required. Risks greater than 10^{-4} are considered unacceptable.

7.4.2 Noncancer Health Effects

The equation specified for estimating noncancer risk (U.S. EPA) is:

noncancer risk = estimated dose rate/RfD

This ratio of dose to nontoxic dose is called a hazard quotient (HQ). The HQ is a measure of whether the estimated dose of a chemical exceeds the highest toxic dose (i.e., the RfD). The likelihood of effects increases as the ratio increases above 1.0. A conservative estimate of the hazard associated with exposure to all chemicals by a specific pathway, such as the inhalation pathway, is obtained by summing the HQs of the chemicals associated with the pathway. The sum of HQs is called the "hazard index" (HI).

HIs are not probabilities. An HI is a ratio of an exposure level to a nontoxic level. Because an HI value of 1 indicates that lifetime exposure has limited potential for causing an adverse effect in sensitive populations, values of less than 1 can generally be considered acceptable. Values greater that 1 are usually given closer attention.

7.4.3 Incremental Risk

Metals are natural components of the earth's crust. Some metals are carcinogenic and, therefore, present a cancer risk at naturally occurring (background) concentrations. A human-caused release of a carcinogenic metal to an environment where the metal already exists does not create risk; it increases risk. The increase is called "incremental risk." For each of the carcinogenic metals identified at Sites 7 and 14, background and incremental cancer risk estimates were calculated. Incremental carcinogenic risk was calculated by subtracting background threshold risk for metals from their corresponding total lifetime risk. The incremental cancer risk values for the carcinogenic metals were

combined with the total cancer risk values for the organic carcinogens to obtain the overall risk estimate for the site.

Incremental risk was not calculated for the systemic toxicants because noncarcinogenic effects have thresholds. If the background concentration of a noncarcinogen does not produce an exposure level above the toxicity threshold, it poses no risk of adverse health effects. However, if, as a result of site operations, the concentration of the noncarcinogen increases above background and reaches a concentration that produces an exposure level above the toxicity threshold, the noncarcinogen will then have a potential for causing adverse health effects even if the concentration above background does not, in itself, pose a risk. Therefore, the systemic effects presented by the total concentration (background plus the amount above background) must be considered when making a risk management decision.

7.5 RISK CHARACTERIZATION RESULTS

The following text discusses the resultant risk estimates for the industrial and residential receptors at Sites 7 and 14. These results are summarized in Tables 7-1 and 7-2. In addition, the tables and text identify the chemicals of concern (COCs) (risk drivers) accounting for most or all of the total cancer and noncancer risk.

For the carcinogens, two estimates of cancer risk are given for each receptor (Tables 7-1 and 7-2). The first estimate is based exclusively on U.S. EPA CSFs and the second is based on U.S. EPA CSFs with Cal-EPA CSFs substituted for certain chemicals. Note that both risk estimates are presented even though the COCs at an area of potential concern may not include any of the eight chemicals for which a Cal-EPA CSF has been assigned. In such cases, the estimates of total cancer risk are identical.

The cancer risk for the adult resident is slightly higher than for the child. Therefore, to simplify the presentation of the results, this section is limited to the discussion of the adult cancer risks. The results of the industrial-worker and resident noncancer risk HI and the hazard evaluation of lead are also presented in this section. For the resident receptor, noncancer risk estimates discussed in the text are the higher of the child or the adult estimates.

7.5.1 Site 7

As shown in Table 7-1, cancer risks at Site 7 fall within U.S. EPA's generally allowable risk range at all areas except Unit 4. At Unit 4, cancer risks under the industrial scenario fell within the allowable risk range of less than 10^{-6}; under the residential scenario, cancer risks at Unit 4 are within the generally allowable risk range of 10^{-6} to 10^{-4}. Site 7 risk drivers included arsenic and the PAHs benzo(a)pyrene and dibenz(a,h)anthracene. The EPCs and contribution to cancer risks from these chemicals are shown in Table 7-1. As noted in the table, the maximum concentration of benzo(a)pyrene was used to estimate risk at Units 4 and 5.

The contribution of background arsenic to the total risk was calculated during the RI. At Units 1, 3, and 5, areas with arsenic identified as a cancer risk driver, the RI estimated

that the contribution of background arsenic to the on-site arsenic risk ranged from 28 (Unit 1) to 69 percent (Unit 3) for surface soils (0 to 2 feet bgs), and from 40 (Unit 1) to 68 percent (Unit 3) for shallow soils (0 to 10 feet bgs). Therefore, the RI concluded that most of the cancer risk due to arsenic is associated with background arsenic levels that are not the result of site-specific release or contamination.

Noncancer risks at all units are less than 1 under the industrial scenario and equal or exceed 1 under the residential scenario at Units 1 (1.4) and 3 (1.0). This exceedance is mainly due to the risk contribution from manganese, identified at 46 and 51 percent for Units 1 and 3, respectively. However, as noted in the RI, the levels of manganese at these two units are within background. In addition, the RI noted that the inhalation RfDs used for manganese, presented in the Region 9 table of preliminary remediation goals (PRGs), were estimated only for an adult receptor. The adult RfD was also used to estimate the noncancer risk for a resident child. Use of the more appropriate child-derived RFD would have reduced the manganese hazard quotient by approximately 50 percent.

The risks from exposure to lead at all units at Site 7 were considered acceptable under the industrial scenario based on a comparison of the 95th percent UCL for lead in surface soil to the U.S. EPA industrial PRG for lead (1,000 mg/kg). The 95 percent UCL for lead in surface soil was 102 mg/kg at Unit 1, 50 mg/kg at Unit 3, and 931 mg/kg at Unit 5. Lead was not a COPC at Unit 4.

The Cal-EPA residential PRG for lead is 130 mg/kg. The 95 percent UCL for lead in shallow soil was 21 mg/kg at Unit 1 and 5 mg/kg at Unit 3. The concentrations of lead at these units were therefore considered acceptable. The Cal-EPA pharmacokinetic model was used to evaluate the potential lead exposure at Unit 5. Lead concentrations at the surface ranged from 1.5 to 931 mg/kg. Seven of the ten lead sample results were measured below 130 mg/kg. The remaining three were measured at 323, 495, and 931 mg/kg. Lead was assessed by comparing resulting blood level concentrations (50th, 90th, 95th, 98th, and 99th percentile) with the benchmark of 10 micrograms per deciliter (μg/dL), which has been established by the U.S. EPA as a level below which the most serious effects of lead are unlikely to occur. The estimated concentrations of lead in the blood of the resident adult and child did not exceed this threshold value. Hence, the RI concluded that potential adverse health effects from exposure to lead concentrations at Unit 5 were considered unlikely.

7.5.2 Site 14

As shown in Table 7-2, cancer and noncancer risks at the catch basin at Site 14 are within the range considered allowable by U.S. EPA under both the industrial and residential scenarios.

Noncancer risks at Site 14 Unit 1 are less than 1, indicating that systemic toxicity is unlikely. Cancer risks at Site 14 Unit 1 are within the range considered generally allowable by U.S. EPA under both the industrial and residential scenarios. The primary cancer risk drivers at Unit 1 are arsenic and the PAHs benz(a,h)anthracene and

Table 7-1
Site 7 Risk Summary for the Industrial and Residential Scenarios
(exposure-point concentration reported in milligrams per kilogram)

	CANCER RISK[a]						NONCANCER RISK[b]					
	Industrial Scenario (0 – 2 feet bgs)			Residential Scenario (0 – 10 feet bgs)			Industrial Scenario (0 – 2 feet bgs)			Residential Scenario (0 – 10 feet bgs)		
Site 7	Risk U.S. EPA/ Cal-EPA[c]	Risk Drivers (% U.S. EPA/ % Cal-EPA)	EPC	Risk U.S. EPA/ Cal-EPA	Risk Drivers (% U.S. EPA/ % Cal-EPA)	EPC	Hazard Index	Risk Drivers (% U.S. EPA/ % Cal-EPA)	EPC	Hazard Index	Risk Drivers (% U.S. EPA/ % Cal-EPA)	EPC
Unit 1	9.7E-06/ 1.3E-05(T)	benzo(a)pyrene (43%/53%), arsenic (25%/18%), and dibenz(a,h)anthracene (20%/15%)	1.39 6.98 0.62	2.8E-05/ 3.3E-05(T)	arsenic (46%/39%), benzo(a)pyrene (22%/30%), and dibenz(a,h)anthracene (21%/18%)	4.99 0.36 0.35	0.11	no risk drivers identified	NA	1.4	manganese (46%), arsenic (17%), and aluminum (13%)	288 4.99 13,300
Unit 3	2.2E-06/ 2.7E-06(T)	arsenic (45%/37%), benzo(a)pyrene (25%/33%), and dibenz(a,h)anthracene (25%/20%)	2.84 0.18 0.18	1.5E-05/ 1.7E-05(T)	arsenic (51%/45%), dibenz(a,h)anthracene (20%/18%), and benzo(a)pyrene (19%/27%)	2.88 0.18 0.16	0.067	no risk drivers identified	NA	1.0	manganese (51%)	232
Unit 4	1.9E-07/ 3.0E-07(T)	no risk drivers identified	NA	1.1E-06/ 1.7E-06(T)	benzo(a)pyrene (54%/57%)	0.034[d]	0.0094	no risk drivers identified	NA	0.5	no risk drivers identified	NA
Unit 5	2.6E-06/ 3.4E-06(T)	arsenic (50%/38%) and benzo(a)pyrene (42%/53%)	3.61 0.37[d]	1.7E-05/ 2.2E-05(T)	arsenic (55%/42%) and benzo(a)pyrene (38%/50%)	3.45 0.37[d]	0.015	no risk drivers identified	NA	0.55	no risk drivers identified	NA

Notes:
[a] cancer risk results shown are for the hypothetical resident adult; adult cancer risks are higher than the child cancer risk
[b] systemic toxicity results shown are for the hypothetical resident child; child noncancer risks are higher than the adult noncancer risk
[c] risk listed once when U.S. EPA-derived risks equal Cal-EPA-derived risks
[d] maximum concentration used as the EPC

Acronyms/Abbreviations:
bgs – below ground surface
Cal-EPA – California Environmental Protection Agency
EPC – exposure-point concentration
NA – not applicable
T – total risk
U.S. EPA – United States Environmental Protection Agency

Table 7-2
Site 14 Risk Summary for the Industrial and Residential Scenarios
(exposure-point concentration reported in milligrams per kilogram)

	CANCER RISK[a]						NONCANCER RISK[b]					
	Industrial Scenario (0 – 2 feet bgs)			Residential Scenario (0 – 10 feet bgs)			Industrial Scenario (0 – 2 feet bgs)			Residential Scenario (0 – 10 feet bgs)		
Site 14	Risk U.S. EPA/ Cal-EPA[c]	Risk Drivers (% U.S. EPA/ % Cal-EPA)	EPC	Risk U.S. EPA/ Cal-EPA	Risk Drivers (% U.S. EPA/ % Cal-EPA)	EPC	Hazard Index	Risk Drivers (% U.S. EPA/ % Cal-EPA)	EPC	Hazard Index	Risk Drivers (% U.S. EPA/ % Cal-EPA)	EPC
Catch basin	1.0E-07(T)	no risk drivers identified	NA	6.2E-07(T)	no risk drivers identified	NA	0.00048	no risk drivers identified	NA	0.0088	no risk drivers identified	NA
Unit 1	5.4E-06/ 6.5E-06(T)	dibenz(a,h)anthracene (35%/29%), arsenic (35%/29%) and benzo(a)pyrene (22%/29%)	0.64[d] 5.52 0.39	3.7E-05/ 4.4E-05(T)	arsenic (38%/32%), dibenz(a,h)anthracene (30%/25%) and benzo(a)pyrene (24%/32%)	5.29 0.64[d] 0.50	0.042	no risk drivers identified	NA	0.94	no risk drivers identified	NA

Notes:
[a] cancer risk results shown are for the hypothetical resident adult; adult cancer risks are higher than the child cancer risk
[b] systemic toxicity results shown are for the hypothetical resident child; child noncancer risks are higher than the adult noncancer risk
[c] risk listed once when U.S. EPA-derived risks equal Cal-EPA-derived risks
[d] maximum concentration used as the EPC

Acronyms/Abbreviations:
bgs – below ground surface
Cal-EPA – California Environmental Protection Agency
EPC – exposure-point concentration
NA – not applicable
T – total risk
U.S. EPA – United States Environmental Protection Agency

benzo(a)pyrene. The EPCs and contribution to cancer risks from these chemicals is shown in Table 7-2. As shown in the table, the maximum concentration of dibenz(a,h)anthracene (0.64 mg/kg) was used as the EPC. The contribution of background arsenic to the total risk was calculated during the RI. This calculation showed that the contribution of background arsenic to the on-site arsenic risk was 36 percent under the industrial scenario and 37 percent under the residential scenario.

The risks from exposure to lead were not assessed at the catch basin because lead was not identified as a COPC at the catch basin. The risk for lead at Unit 1 under the industrial scenario was considered acceptable based on a comparison of the U.S. EPA PRG (1,000 mg/kg) for lead with the 95 percent UCL for lead (923 mg/kg) in the surface soil.

Because the Cal-EPA residential soil PRG for lead (130 mg/kg) was exceeded at Unit 1 (923 mg/kg), the Cal-EPA pharmacokinetic model was used to estimate the blood level concentration for a resident child and an adult exposed to lead in soil. Lead was evaluated by comparing resulting blood level concentrations (50th, 90th, 95th, 98th, and 99th percentile) with the benchmark of 10 μg/dL, which has been established by the U.S. EPA as a level below which the most serious effects of lead are unlikely to occur. The estimated concentration of lead in the blood of the resident adult did not exceed this threshold value; however, concentrations of lead in the blood of the resident child at the 90th, 95th, 98th, and 99th percentile were estimated over the benchmark. This exceedance was evaluated and was found to be acceptable because the concentration used in assessing health effects was the highest measured concentration and because it is not realistic to assume that a child would be exposed to the maximum concentration (i.e., would remain at the same location) for the entire (30-year) duration of exposure.

7.6 BASIS FOR RISK MANAGEMENT DECISION

Cancer and noncancer risks at Sites 7 and 14 were estimated for both residential and industrial scenarios. The results are presented in Tables 7-1 and 7-2. With the exception of Site 14, Catch Basin, all residential cancer risks were within the range of 10^{-6} to 10^{-4}. Risks at the catch basin were less than 10^{-6} and were within the range considered allowable without further evaluation.

Both the U.S. EPA and DTSC have indicated via comments on the draft RI Report for Sites 7 and 14 that they interpret the generally allowable (i.e., 10^{-6} to 10^{-4}) risk range stated in the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) as the risk range that should be carefully evaluated for remediation, depending on the frequency and duration of exposure, the population potentially exposed, the weight-of-evidence of carcinogenicity, and other factors, including feasibility and cost of remediation. Both the U.S. EPA and DTSC consider a more appropriate term for the 10^{-6} to 10^{-4} range to be the "risk management range" and that the 10^{-6} risk value be the point of departure for considering remediation of risks in this range. In accordance with this guidance, risks within the range of 10^{-6} to 10^{-4} were subject to a point-of-departure evaluation using criteria provided in the NCP Preamble (*Federal Register*, Vol. 55, No. 46, page 8717).

Per the NCP Preamble, "Preliminary remediation goals for carcinogens are set at a 10^{-6} excess cancer risk as a point of departure, but may be revised to a different risk level within the acceptable risk range based on the consideration of appropriate factors including, but not limited to: exposure factors, uncertainty factors, and technical factors.

"Included in the exposure factors are: the cumulative effect of multiple contaminants, the potential for human exposure from other pathways at the site, population, sensitivities, potential impacts on environmental receptors, and cross-media impacts of alternatives.

"Factors related to uncertainty may include: the reliability of alternatives, the weight of scientific evidence concerning exposures and individual and cumulative health effects, and the reliability of exposure data.

"Technical factors may include: detection/quantification limits for contaminants, technical limitations to remediation, the ability to monitor and control movement of contaminants, and background levels of contaminants. The final selection of the appropriate risk level is made when the remedy is selected based on the balancing of criteria..."

Of the factors enumerated in the NCP, the primary factors considered by the DON in determining that no action was appropriate for Sites 7 and 14 were the background level of contaminants, the ability to monitor and control movements of contaminants, and the reliability of exposure data. These factors are discussed in the following sections along with future uses of the sites and distribution of contaminants.

7.6.1 Background Level of Contaminants

The largest contributors to cancer risks at Sites 7 and 14 were arsenic and PAHs.

To evaluate the risk contributions due to arsenic, the DON estimated total and incremental contributions of arsenic to the carcinogenic risk at Sites 7 and 14. The results are summarized in Tables 7-3 and 7-4 for the industrial and residential scenarios, respectively.

These tables show that the incremental risk from arsenic is generally less than or only slightly greater than 10^{-6} and that the background risk for arsenic is generally the same order of magnitude as the total risk. This suggests that the concentrations of arsenic reported at both sites may not be the result of site-specific releases or contamination.

Under industrial conditions, the cumulative HI is less than 1.0. For residential land use, the HI equals or exceeds the threshold of 1 for Site 7 Units 1 (HI = 1.4) and 3 (HI = 1.0). This exceedance is mainly because of arsenic and manganese. As discussed above, the concentrations of arsenic do not appear to be significantly different from background levels when evaluated from a risk assessment perspective.

Table 7-3
Contribution of Arsenic to Carcinogenic Risk in the Industrial Scenario

Site and Unit	Total Site Risk[a]	Risk Due to Arsenic	Background Risk Due to Arsenic	Incremental Risk Due to Arsenic
Site 7				
Unit 1	1.3×10^{-5}	2.4×10^{-6}	6.8×10^{-7}	1.7×10^{-6}
Unit 3	2.7×10^{-6}	9.9×10^{-7}	6.8×10^{-7}	3.1×10^{-7}
Unit 4	3.0×10^{-7}	NA[b]	NA[b]	NA[b]
Unit 5	3.4×10^{-6}	1.3×10^{-6}	6.8×10^{-7}	6.2×10^{-7}
Site 14				
Unit 1	6.5×10^{-6}	1.9×10^{-6}	6.8×10^{-7}	1.2×10^{-6}
Catch Basin	1.0×10^{-7}	NA[b]	NA[b]	NA[b]

Notes:
[a] the value shown is the higher of the U.S. EPA or Cal-EPA carcinogenic risk and represents the sum of the contributions from all COPCs
[b] arsenic was not a COPC at this unit

Acronyms/Abbreviations:
Cal-EPA – California Environmental Protection Agency
COPC – chemical of potential concern
NA – not applicable
U.S. EPA – United States Environmental Protection Agency

Table 7-4
Contribution of Arsenic to Carcinogenic Risk in the Residential Scenario

Site and Unit	Total Risk[a]	Risk Due to Arsenic	Background Risk Due to Arsenic	Incremental Risk Due to Arsenic
Site 7				
Unit 1	3.3×10^{-5}	1.3×10^{-5}	5.2×10^{-6}	7.8×10^{-6}
Unit 3	1.7×10^{-5}	7.7×10^{-6}	5.2×10^{-6}	2.5×10^{-6}
Unit 4	1.7×10^{-6}	NA[b]	NA[b]	NA[b]
Unit 5	2.2×10^{-5}	9.3×10^{-6}	5.2×10^{-6}	4.1×10^{-6}
Site 14				
Unit 1	4.4×10^{-5}	1.4×10^{-5}	5.2×10^{-6}	8.8×10^{-6}
Catch Basin	6.2×10^{-7}	NA[b]	NA[b]	NA[b]

Notes:
[a] the value shown is the higher of the U.S. EPA or Cal-EPA carcinogenic risk and represents the sum of the contributions from all COPCs
[b] arsenic was not a COPC at this unit

Acronyms/Abbreviations:
Cal-EPA – California Environmental Protection Agency
COPC – chemical of potential concern
NA – not applicable
U.S. EPA – United States Environmental Protection Agency

In addition, a background study of metals in soil at MCAS El Toro was performed in 1996 (BNI 1996a). Based on this study, which included 43 samples with arsenic concentrations ranging from 0.29 to 8.5 mg/kg, the background concentration of arsenic was determined to be 6.86 mg/kg. This value represents the 95th quantile, or percentile of the mean population value. Since the background determination is a statistically based approach, it is not unexpected that a certain number of samples will exceed the 95th percentile yet still be within the true population or, in other words, still be indicative of the naturally occurring concentrations. The RI data for arsenic in soil at Site 7 are summarized in Figure 5-5. These data indicate that approximately 98 percent of the arsenic analytical results are less than the background concentrations for MCAS El Toro. Similarly, the data set from which the MCAS El Toro background value was derived also includes some values greater than the calculated background value.

The background for manganese was determined to be 291 mg/kg. This was based on 43 samples with manganese concentrations ranging from nondetect to 574 mg/kg (BNI 1996a). The RI data for manganese in soil at Site 7 showed that approximately 79 percent of the manganese analytical results are less than the background concentrations. The highest concentration above background, 423 mg/kg, was much lower than the highest concentration measured in the background population sample. In addition, from a risk perspective, the HIs for manganese at Units 1 and 3 were only 1.4 and 1.1 times its HI at background. This indicates that the concentration of manganese is not significantly different from background at the site. Finally, there are no known historical site-related activities that involved the use of manganese.

Based on these data and risk calculations, it was concluded that the concentrations of arsenic and manganese present at Site 7 reflect natural, background conditions.

7.6.2 Ability to Monitor and Control Movement of Contaminants

Another factor considered by the DON in making the no action decision for Sites 7 and 14 was that PAHs were present at low concentrations and do not have a tendency to migrate off-site or to groundwater. As discussed in the fate and transport evaluation in Section 5 of the RI Report for Sites 7 and 14 (BNI 2000), as a chemical group, PAHs have low water solubility and high affinity for sorption to organic matter. These are characteristics that limit the potential for leaching through soil as a transport process and cause the chemicals to be relatively immobile.

7.6.3 Reliability of Exposure Data

The DON also considered the reliability of exposure data in making the no further action decision for Sites 7 and 14. As discussed in the fate and transport evaluation in Section 5 of the RI Report for Sites 7 and 14, in shallow soil biodegradation is the most important transformation process affecting the persistence of PAHs. Another potentially important transformation process, photolysis, is limited to areas where surface soils are exposed to sunlight.

The chemical concentrations used in the risk assessment were assumed to remain constant for the entire exposure duration. However, it is highly unlikely that the organic concentrations will remain constant, particularly in soil. Benzo(a)pyrene and dibenz(a,h)anthracene, the risk drivers, are biodegradable. Under aerobic conditions, the half-lives of these PAHs have been estimated to be 1.45 and 2.57 years, respectively, with 0.16 and 1 year possible under ideal conditions (Howard et al. 1991). This means that it is very likely that the risks due to PAHs are overstated.

Manganese was the largest contributor to noncancer risk. However, as discussed in the RI Report, the contribution of manganese is overstated because, for inhalation exposures, the RfD values used represent only the adult receptor. The inhalation RfDs were estimated from inhalation reference concentrations by integrating the adult body weight and inhalation rate. The resultant adult RfD is also used to estimate the noncancer risk for a resident child. Use of an adult RfD overestimates the resultant hazard to a child to the extent that the noncancer risk would be significantly lower by use of a child-derived RfD.

Another area of uncertainty in the exposure assessment is the prediction of human activities that lead to contact with environmental media and exposure to chemicals. The residential risk assessment assumes that a adult is exposed to chemicals present at the site 24 hours a day, 350 days a year for 30 years. In reality, exposure times are likely to be much less, especially because the current anticipated reuse of Sites 7 and 14 is not residential.

Finally, data evaluation involves using statistics to summarize the data, comparing summary data to background concentrations, and selecting COCs. A chemical was assumed to be present at one-half the detection limit in samples where no chemical actually was identified. Thus, no "zero" values were used in the calculation of the 95 percent UCLs. In addition, maximum concentrations were used as the EPCs instead of 95 percent UCLs under various conditions. The assumption of long-term contact with the maximum concentration is conservative, and the use of the maximum concentration in the risk assessment results in overestimates of exposures and risks.

7.6.4 Future Use of Sites 7 and 14

It should also be noted that the NCP allows future use of the site to be considered when performing a risk assessment. The future use of Sites 7 and 14 is industrial (airfield). Had the risk assessment been performed solely for an industrial use, risk at every unit would have been lower than the residential risk values discussed above.

7.6.5 Distribution of Contaminants

A final factor considered in the no action decision for Sites 7 and 14 was whether the distribution of contaminants within each unit at these sites indicated that the concentration of contaminants at one or more sample locations was significantly elevated over the remaining unit concentrations (possibly representing a "hot spot"). The RI Work Plan included provisions for additional (step-out) sampling to evaluate areas with

significantly elevated contaminant concentrations. However, the DON and the regulatory agency members of the BCT examined the data collected at the sites during the RI and did not identify any areas requiring further evaluation as hot spots.

Section 8
DESCRIPTION OF NO ACTION ALTERNATIVE

On the basis of the Phase I and Phase II RIs and the baseline HHRA results, Sites 7 and 14 do not appear to pose an unacceptable risk to human health or the environment. Accordingly, no remedial action is appropriate for the RI sites. Under the no action alternative, monitoring, periodic reviews, and deed restrictions, including deed notification, are not required. The DTSC and U.S. EPA agree with this determination. The DON's selection of no action for these sites reflects the determination that the overall condition of the sites is protective of human health and the environment.

Section 121(d) of CERCLA states that remedial actions at CERCLA sites must, upon completion, attain any federal (or state if more stringent) environmental standards, requirements, criteria, or limitations that are determined to be applicable or relevant and appropriate requirements (ARARs). ARARs do not apply unless remedial action is being taken at a site and are, therefore, not applicable to the no action sites addressed in this ROD.

Although no deed restrictions are required because of chemicals present in soil at Sites 7 and 14, shallow groundwater underlying the sites is contaminated by TCE (Sites 7 and 14), carbon tetrachloride (Sites 7 and 14), and tetrachloroethene (Site 7 only). Remedial investigations have shown that the contamination does not originate from these sites. Use restrictions prohibiting drilling of wells and/or extraction of groundwater and allowing access for groundwater monitoring and maintenance of equipment associated with groundwater remediation will be addressed in the ROD for Sites 18 and 24. Figure 8-1 shows the location of Sites 7 and 14 relative to the TCE groundwater plume originating at Site 24.

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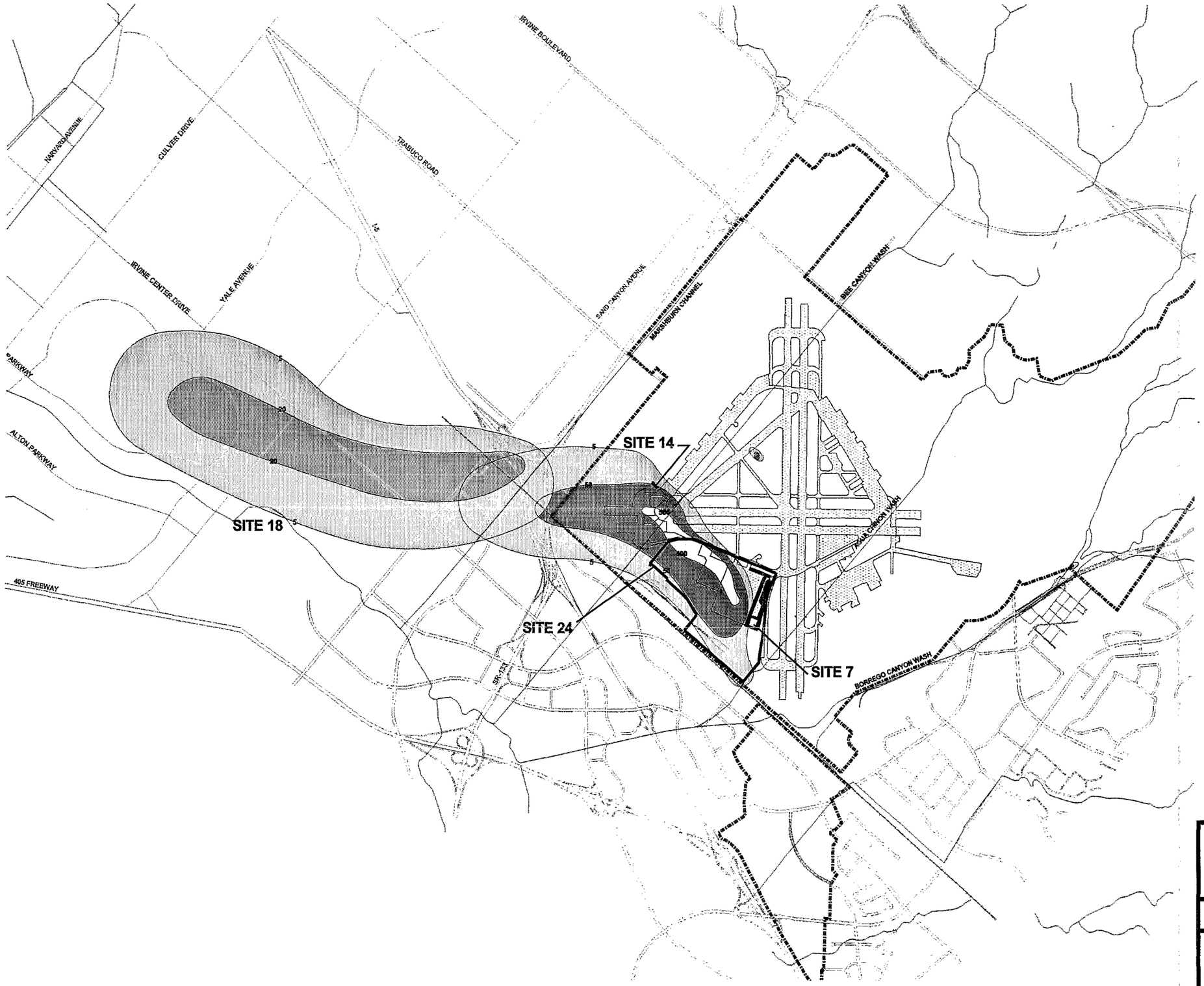

LEGEND

- MCAS EL TORO SITES
- RAIL ROAD
- STREAM OR WASH
- MCAS EL TORO BOUNDARY
- ROAD
- FREEWAY

TCE CONCENTRATIONS IN GROUNDWATER

- 5.0 TO 50.0 ug/L TCE
- 50.0 TO 500.0 ug/L TCE
- GREATER THAN 500.0 ug/L TCE
- 5 — INFERRED ISO CONCENTRATION CONTOUR (ug/L)

NOTES:

REVIEW QUALIFIERS:
U - UNDETECTED
J - ESTIMATED

NS - NOT SAMPLED

FOR MULTI-PORT OR CLUSTER WELL LOCATIONS THE HIGHEST CONCENTRATIONS WAS USED FOR CONTOURING THE PLUME.

SOURCES:
BASEMAP - JACOBS ENGINEERING

N

3000 0 3000 Feet

Record of Decision
Figure 8-1
Sites 7 and 14 and TCE Groundwater Plume
October 1998

MCAS, El Toro, California

Bechtel National, Inc.
CLEAN II Program

Date: 11/15/00
File No.: 171H6049
Job No.: 22214-171
Rev No.: A

Section 9
DOCUMENTATION OF SIGNIFICANT CHANGES

The Proposed Plan for Sites 7 and 14 was released for public comment in September 2000. The Proposed Plan identified no action as the appropriate response for these sites. The DON reviewed all written and verbal comments submitted during the comment period. Upon review of these comments, it was determined that no significant change to the response, as it was originally identified in the Proposed Plan, was necessary.

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Section 10
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RESPONSIVENESS SUMMARY

RESPONSE TO WRITTEN COMMENTS
RECEIVED DURING THE PUBLIC COMMENT PERIOD

RESPONSIVENESS SUMMARY
MARINE CORPS AIR STATION – EL TORO, CALIFORNIA
PROPOSED PLAN, OPERABLE UNIT 3B, SITES 7 AND 14

Letters Received During Public Comment Period

Comments by: ***Robert Richardson, Interim Executive Director, MCAS El Toro Master Development Program, in a Letter Dated 08 November 2000***

Number	Comments	Responses
1A	Thank you for the opportunity to provide comments on the Final Proposed Plan ("Proposed Plan") for Operable Unit 3, Installation Restoration Program ("IRP") Sites 7 and 14, at the former Marine Corps Air Station ("MCAS") El Toro, which was issued by the Department of the Navy/United States Marine Corps ("DON/USMC") in September 2000. Discussed below are the areas of most concern to the LRA regarding the Proposed Plan for IRP Sites 7 and 14; the attached memorandum prepared by GeoSyntec Consultants ("GeoSyntec") provides more detail. 1. Selection of Inappropriate "Risk Management Range" for Cancer Risks The LRA is extremely concerned that DON/USMC is promoting an excess cancer risk range of 10^{-4} to 10^{-6} as being "acceptable" for these two IRP sites. For several reasons, we believe that all cancer risks associated with hazardous substances at the MCAS El Toro property should be reduced to less than or equal to 10^{-6}, as agreed to by DON/USMC for IRP Sites 8, 11, and 12. First, cancer risks falling within the 10^{-4} to 10^{-6} range are not *ipso facto* protective of human health and the environment. Rather, as stated in the Proposed Plan, risks in this range "may not require remediation, depending on site-specific circumstances." Proposed Plan, p. 1.[1] Yet, [1] In fact, in its comments on the draft Proposed Plan the United States Environmental Protection Agency ("EPA") took issue with DON/USMC stating that cancer risks falling within the 10^{-4} to 10^{-6} range were always acceptable, and specifically recommended that the quoted language be included in the text of the revised Proposed Plan. See Response to Comments on Draft Proposed Plan for IRP Sites 7 and 14, dated July 10, 2000.	The Department of the Navy (DON) agrees that excess cancer risks within the range of 10^{-6} to 10^{-4} are not always acceptable and that cancer risks falling within this range are not *ipso facto* protective of human health and the environment. As discussed in the Proposed Plan, cancer risks between 10^{-6} and 10^{-4} are within the "risk management range/ generally allowable risk range." Risks within this range require further site-specific evaluation to determine whether remedial action is required. Consistent with the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) Preamble (*Federal Register*, Vol. 55, No. 46, page 8717), several factors were considered by the DON and the regulatory agencies in making the no-action recommendation for Installation Restoration Program (IRP) Sites 7 and 14. These factors are discussed in the Remedial Investigation (RI) Report and the Proposed Plan and are addressed further in the paragraphs that follow. Per the NCP Preamble, "Preliminary remediation goals for carcinogens are set at a 10^{-6} excess cancer risk as a point of departure, but may be revised to a different risk level within the acceptable risk range based on the consideration of appropriate factors including, but not limited to: exposure factors, uncertainty factors, and technical factors. "Included in the exposure factors are: the cumulative effect of multiple contaminants, the potential for human exposure from other pathways at the site, population, sensitivities, potential impacts on environmental receptors, and cross-media impacts of alternatives. "Factors related to uncertainty may include: the reliability of alternatives, the weight of scientific evidence concerning exposures and individual and cumulative health effects, and the reliability of exposure data.

Letters Received During Public Comment Period		
Comments by:	*Robert Richardson, Interim Executive Director, MCAS El Toro Master Development Program, in a Letter Dated 08 November 2000*	
Number	**Comments**	**Responses**
	nowhere in the Proposed Plan does DON/USMC discuss any circumstances which justify leaving contamination in a place that, with only one exception, presents a risk exceeding 10^{-6} at all units within IRP Sites 7 and 14.	"Technical factors may include: detection/quantification limits for contaminants, technical limitations to remediation, the ability to monitor and control movement of contaminants, and background levels of contaminants. The final selection of the appropriate risk level is made when the remedy is selected based on the balancing of criteria . . . ." Of the factors enumerated in the NCP, the primary factors considered by the DON and approved by the regulatory agencies in the determination that no action was appropriate for Sites 7 and 14 were: 1) the background level of contaminants, 2) the ability to monitor and control movements of contaminants, and 3) the reliability of exposure data. These are discussed individually below. **Point of Departure Evaluation** Cancer and noncancer risks at Sites 7 and 14 were estimated for both residential and industrial scenarios. The results were presented in Table ES-1 of the RI and summarized in the Proposed Plan. The residential and industrial cancer risks are shown below. **Site/Unit** — **Residential Scenario** — **Industrial Scenario** Site 7, Unit 1 — 3.3×10^{-5} — 1.3×10^{-5} Site 7, Unit 3 — 1.7×10^{-5} — 2.7×10^{-6} Site 7, Unit 4 — 1.7×10^{-6} — 3.0×10^{-7} Site 7, Unit 5 — 2.3×10^{-5} — 3.6×10^{-6} Site 14, Unit 1 — 4.4×10^{-5} — 6.5×10^{-6} Site 14, Catch Basin — 6.2×10^{-7} — 1.0×10^{-7} With the exception of Site 14, Catch Basin, all residential risks were within the risk management range. Risks at the Catch Basin were less than 10^{-6} and were within the range considered acceptable without further evaluation. The remaining risks were subject to a point of departure evaluation using the NCP criteria noted above. The rationale for the no-action recommendation is summarized below.

Letters Received During Public Comment Period		
Comments by:	*Robert Richardson, Interim Executive Director, MCAS El Toro Master Development Program, in a Letter Dated 08 November 2000*	
Number	**Comments**	**Responses**
		Background Level of Contaminants The largest contributors to cancer risks at Sites 7 and 14 were arsenic and polynuclear aromatic hydrocarbons (PAHs). To evaluate the risk contributions of arsenic, the DON estimated during the RI the total and incremental contributions of arsenic to the carcinogenic risk at Sites 7 and 14. The results are summarized in Attachment A for the industrial and residential scenarios. The tables in Attachment A show that the incremental risk from arsenic is generally less than or only slightly greater than 10^{-6} and that the background risk for arsenic is generally the same order of magnitude as the total risk. This suggests that the concentrations of arsenic reported at both sites may not be the result of site-specific releases or contamination. In addition, a background study of metals in soil at Marine Corps Air Station (MCAS) El Toro was performed in 1996 (BNI 1996). Based on this study, which included 43 samples with arsenic concentrations ranging from 0.29 milligrams per kilogram (mg/kg) to 8.5 mg/kg, the background concentration of arsenic was determined to be 6.86 mg/kg. This value represents the 95th quantile, or percentile of the mean population value. Since the background determination is a statistically based approach, it is not unexpected that a certain number of samples will exceed the 95th percentile yet still be within the true population or, in other words, still be indicative of the naturally occurring concentrations. The RI data for arsenic in soil at Site 7 are summarized in Figure 4-4 of Attachment O. These data indicate that approximately 98 percent of the arsenic analytical results are less than the background concentrations for MCAS El Toro. Similarly, the data set from which the MCAS El Toro background value was derived also includes some values greater than the calculated background value.

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		Under industrial conditions, the cumulative hazard index (HI) at Sites 7 and 14 is less than 1.0. Similarly, the HI at Site 14 is less than 1 under residential conditions. For residential land use, the HI at Site 7 equals or exceeds the threshold of 1 for Units 1 (1.4) and 3 (1.0). This exceedance is mainly because of manganese. However, as pointed out by California Environmental Protection Agency (Cal-EPA) Department of Toxic Substances Control (DTSC) in the review of the RI (November 1999), the hazard quotient for manganese is an overestimate because the exposure calculated for a resident child was compared to the published inhalation reference dose (U.S. EPA 1998) for an adult in accordance with Region 9 practice. However, use of a more appropriate inhalation reference dose for a child would have reduced the manganese hazard quotient at Sites 7 and 14 by 50 percent. Rather than reperforming the risk assessment using a child-derived inhalation reference dose, this issue was addressed in the uncertainty portion of the risk assessment. The uncertainty discussion was reviewed and accepted by DTSC. In addition, the background for manganese was determined to be 291 mg/kg. This was based on 43 samples with manganese concentrations ranging from nondetect to 574 mg/kg. The RI data for manganese in soil at Site 7 showed that approximately 79 percent of the manganese analytical results are less than the background concentrations. The highest concentration above background, 423 mg/kg, was much lower than the highest concentration measured in the background population sample. In addition, from a risk perspective, the HI for manganese at Units 1 and 3 was only 1.4 and 1.1 times its HI at background. This indicates that the concentration of manganese is not significantly different from background at the site. Finally, there are no known historical site-related activities that involved the use of manganese. Based on these data and risk calculations, it was concluded that the concentrations of arsenic and manganese present at Site 7 reflect natural, background conditions.

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		Ability to Monitor and Control Movements of Contaminants Another factor considered by the DON and approved by the regulators when they made the no action recommendation for Sites 7 and 14 was that PAHs were present at low concentrations and do not have a tendency to migrate off-site or to groundwater. As discussed in the fate and transport evaluation in Section 5 of the Site 7/14 RI (BNI 2000), as a chemical group, PAHs have low water solubility and a high affinity for sorption to organic matter. These are characteristics that limit the potential for leaching through soil as a transport process and cause the chemicals to be relatively immobile. **Reliability of Exposure Data** The DON also considered the reliability of exposure data when it made the no further action recommendation for Sites 7 and 14. As discussed in the fate and transport evaluation in Section 5 of the draft final RI Report for Sites 7 and 14, shallow soil biodegradation is the most important transformation process affecting the persistence of PAHs. Another potentially important transformation process, photolysis, is limited to areas where surface soils are exposed to sunlight. The chemical concentrations used in the risk assessment were assumed to remain constant for the entire exposure duration. However, it is highly unlikely that the organic concentrations will remain constant, particularly in soil. Benzo(a)pyrene and dibenz(a,h)anthracene, the risk drivers, are biodegradable. Under aerobic conditions, the half-lives of these PAHs have been estimated to be 1.45 and 2.57 years, respectively, with 0.16 and 1 year possible under ideal conditions (Howard et al. 1991). This means that it is likely the risks due to PAHs are overstated. Manganese was the largest contributor to noncancer risk. However, as discussed in the RI Report, the contribution of manganese is overstated because, for inhalation exposures, the reference dose (RfD) values used represent only the adult receptor. The inhalation RfDs were estimated from inhalation reference calculations by integrating the adult body weight and inhalation rate. The resultant adult RfD is also used to estimate the noncancer risk for a resident child. Use of an adult RfD overestimates the resultant hazard to a child to the extent that the

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		noncancer risk would be significantly lowered by use of a child-derived RfD. Another area of uncertainty in the exposure assessment is the prediction of human activities that lead to contact with environmental media and exposure to chemicals. The residential risk assessment assumes that an adult is exposed to chemicals present at the site 24 hours a day, 350 days a year for 30 years. In reality, exposure times are likely to be much less, especially because the current anticipated reuse of Sites 7 and 14 is not residential. Finally, data evaluation involves using statistics to summarize the data, comparing summary data to background concentrations, and selecting chemicals of potential concern (COPCs). A chemical was assumed to be present at one-half the detection limit in samples in which no chemical actually was identified. Thus, no "zero" values were used in the calculation of the 95 percent upper confidence limits (UCLs). In addition, maximum concentrations were used as the exposure-point concentrations (EPCs) instead of 95 percent UCLs under various conditions. The assumption of long-term contact with the maximum concentration is conservative, and the use of maximum concentration in the risk assessment results in overestimates of exposures and risks. Considering these factors, the risk levels present at Sites 7 and 14 were evaluated and found to be an acceptable departure from the 10^{-6} point of departure in the NCP. No action is required. The site-specific circumstances/risk management considerations on which the no-further-action recommendations were based are discussed in the Proposed Plan under the section "Characterizing Site Risks and Results" on pages 4 and 5 and are summarized for each unit at Sites 7 and 14 in Table 2 on page 6. The discussion in the Proposed Plan is intended to provide an overview for the general public and does not go into the level of detail of this response or the evaluation of risks in the RI or the Record of Decision (ROD).

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		Future Use of Sites 7 and 14 It should also be noted that the NCP allows future use of the site to be considered when a risk assessment is performed. The proposed future reuse of Sites 7 and 14 is industrial (airfield). Had the risk assessment been performed solely for an industrial use, risk at every unit would have been lower than the residential risk values discussed above. However, had the sites been evaluated only for industrial use, it would have been necessary to place land-use controls on the property prohibiting residential use. To avoid the need for these controls, the DON made a business decision to evaluate risks for both the industrial and residential scenarios and determine whether the risks were acceptable. This evaluation concluded that the risks were acceptable under both residential and industrial scenarios. Therefore, no institutional controls were required under either scenario. **Distribution of Contaminants** A final factor considered in the no-action decision for Sites 7 and 14 was whether the distribution of contaminants at these sites indicated that the concentration of contaminants at one or more sample locations was significantly elevated over the remaining site concentrations (possibly representing a "hot spot"). The RI Work Plan included provisions for additional (step-out) sampling to evaluate areas with significantly elevated contaminant concentrations. However, the DON and the regulatory agency members of the Base Realignment and Closure (BRAC) Cleanup Team (BCT) examined the data collected at the sites during the RI and did not identify any area requiring further evaluation as a hot spot. **Evaluation of the Need for Remedial Action at Sites 8, 11, and 12** Human-health risks at several units at Sites 8, 11, and 12 were also within the generally acceptable/risk management range. As such, they were evaluated on a site-specific basis to determine whether remedial action was required using a point-of-departure evaluation similar to the one described above. The factors that were considered in this evaluation included the extent of contamination, mobility and persistence of the chemicals contributing to the risk, and whether these chemicals were

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		present as a result of site-related activities. Based upon this evaluation, it was determined that remedial action should be taken at five of the eight units at Sites 8, 11, and 12. The baseline human-health risk assessment for Sites 8, 11, and 12 was performed during the Phase II RI in accordance with the final Risk Assessment Work Plan for MCAS El Toro (BNI 1995) using a cancer slope factor of 7.7 and very conservative adherence factors and dermal absorption factors. EPCs that were calculated in the Phase II RI used both 95 percent UCLs and maximum concentrations. Maximum values are typically used in cases where the data set is relatively small or there is a low frequency of detection. Since the risk assessment was performed, the cancer slope factor and several of the exposure parameters used in the risk assessment have changed. On the basis of the analytical data and currently published toxicity values and exposure parameters, the DON has proposed that the risk estimation for Sites 8, 11, and 12 be updated and that the following criteria be used to evaluate the results. • If any of the revised estimated cancer risks exceed 10^{-4} or the HIs exceed 1, then cleanup goals will be revised on the basis of the updated risk-based concentrations. • If the revised estimated cancer risk is between 10^{-6} and 10^{-4} and the HI is 1, then risk management options will be evaluated. • If the revised estimated cancer risk is below 10^{-6} and the HI does not exceed 1, then a new Proposed Plan will be prepared and no further action will be proposed.

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1B	Second, as noted in the attached memorandum prepared by GeoSyntec, the LRA has serious questions about the adequacy of the data collection and analysis that was performed to identify risks associated with historical storage, use and disposal of hazardous substances at IRP Sites 7 and 14.[2] In the absence of a complete resolution of such questions, DON/USMC should adopt a conservative standard for acceptable cancer risks at these two sites. This is particularly true in instances such as this one where the installation property may be reused for a variety of purposes, including residential-type facilities. [2] For example, with respect to the presence of heavy metals DON/USMC: (1) dismisses a soil sample taken from IRP Site 14 with lead concentrations of nearly 1000 mg/kg as being an "outlier"; (2) ignores the fact that 3 out of 10 soil samples had lead levels in excess of the 290 mg/kg, the remediation goal needed to ensure the blood levels in children do not exceed regulatory criteria; (3) asserts that arsenic is naturally occurring and not attributable to historical activities at the base, despite the fact that the "background" levels of arsenic at Site 7 are higher than background levels found elsewhere at the MCAS El Toro property; (4) asserts that manganese also is naturally occurring and not attributable to historical activities, with no apparent consideration given to the fact that manganese is present in many metal alloys and welding materials used for aviation purposes; and (5) ignores the potential presence of and threat from hexavalent chromium at IRP Sites 7 and 14 based solely on data from other sites indicating that this form of chromium is not present in significant amounts.	The DON conducted an RI at IRP Sites 7 and 14 at MCAS El Toro using the United States Environmental Protection Agency (U.S. EPA) data quality objective process. Data collection and analysis were performed with the concurrence and approval of the BCT. As indicated in the Phase II RI Report, Attachments O and P, 140 soil samples were collected from 43 locations at Site 7, and 13 soil samples were collected from 6 locations at Site 14. These locations were randomly positioned within each unit at each site to produce an unbiased configuration of sampling locations. This sampling methodology was designed to provide a high level of confidence (95 percent) that the number of locations and soil samples collected were appropriate to determine the nature and extent of contamination and conduct a human-health risk assessment. A random sampling approach was used because the entire pavement edge areas at Sites 7 and 14 were reportedly used for waste disposal/runoff (i.e., no discrete disposal locations associated with these units were identified). As noted in the response to Comment 1A, even though the proposed future reuse of Sites 7 and 14 is industrial (airfield), the human-health risk assessment was performed for both residential and industrial scenarios. The results were evaluated by the DON using a point-of-departure evaluation as discussed in the NCP, and the risks were found to be acceptable under both scenarios. The following is in response to the specific issues raised in footnotes. 1. The DON disagrees with this statement. No Site 14 lead concentrations were dismissed because they were "outliers." The highest concentration of lead (923 mg/kg) at Site 14 was identified at Unit 1. The Cal-EPA pharmacokinetic model was utilized to estimate the blood lead concentration for a resident child and an adult exposed to lead in the shallow soils. Lead was evaluated by comparing resulting blood lead concentrations (50th, 90th, 95th, 98th, and 99th percentile) with the benchmark of 10 µg/L, which has been established by U.S. EPA as a level below which the most serious effects of lead are unlikely to occur. The concentration of lead used in the estimation was the maximum detected value at the unit. No values were dismissed as "outliers."

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		The DON believes that the reference to an "outlier" may be a reference to Site 7, Unit 5, rather than Site 14. The RI Report reference to this value as an outlier is on page O6-36, Section 6.5.8 of the Risk Analysis (Attachment O). This discussion refers to this result in terms of its fit into the statistical distribution of data. It does not in any way imply that the lead result was dismissed when the need for further evaluation or remediation was determined. Exposure to lead at Site 7, Unit 5 was assessed both with and without the outlier. In both cases (when the outlier was included and when it was not) the estimated concentrations of lead in the blood of the resident adult and child were such that potential adverse effects from exposure to lead concentrations at Unit 5 are considered unlikely. 2. While it is recognized that three lead concentrations in surface soil at Site 7, Unit 5 were greater than 130 mg/kg, it should be noted that, per U.S. EPA guidance, exposure is not evaluated by use of a single sample because that is considered unrealistic and not representative of site conditions (i.e., an individual will not remain stationary at one location for the entire 30-year exposure period). Exposure is assessed by estimates of the central tendency of the data set and not by the individual data points. Lead was assessed by comparing resulting blood lead concentrations (50th, 90th, 95th, 98th, and 99th percentiles) with the benchmark of 10 micrograms per deciliter (μg/dL), which has been established by U.S. EPA as a level below which the most serious effects of lead are unlikely to occur. The estimated concentrations of lead in the blood of the resident adult and child did not exceed this threshold value. Hence, potential adverse health effects from exposure to lead concentrations at Site 7, Unit 5 are considered unlikely. 3. As noted in the response to Local Redevelopment Authority (LRA) Comment 1, a background study of metals in soil at MCAS El Toro was performed in 1996 (BNI 1996). Based on this study, which included 43 samples with arsenic concentrations ranging from 0.29 to 8.5 mg/kg, the background concentration of arsenic was determined to be 6.86 mg/kg. The RI data for arsenic in soil at Site 7 are summarized in Figure 4-4 of Attachment O (BNI 2000). These data indicate approximately 98 percent of the arsenic analytical results are less

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		than the background concentration for MCAS El Toro. While approximately 2 percent of the Site 7 arsenic concentrations exceeded the MCAS El Toro background, these values are indicative of the variation present in nature and in the background study cited above. Furthermore, arsenic concentrations at Site 7 fall within the range of background values of typical California soils (Bradford et al. 1996) and are comparable to arsenic concentrations for other western United States soils (Shacklette and Boerngen 1984). As a last point, the data set from which the MCAS El Toro background value was derived (which had arsenic concentrations ranging from 0.29 to 8.5 mg/kg) also includes some values greater than the calculated background value. 4. Like arsenic addressed above, the manganese concentrations in soil are consistent with background levels found throughout MCAS El Toro. (See the response to LRA Comment 1 for further detail.) Further, historical information pertaining to Sites 7 and 14 does not support the hypothetical activities/sources for manganese cited in this footnote. Site 7 was used for washing aircraft drop tanks. Site 14 was used for disposal of battery fluids. Neither site was used for servicing or maintaining aircraft, nor were repair or maintenance shops where welding and cutting torches may have been used located at Site 7 or 14. 5. An evaluation of the potential presence of hexavalent chromium in soil at the Operable Unit (OU)-3 sites (including sampling at Site 7) was conducted as part of the OU-3A RI performed at MCAS El Toro (BNI 1997). Contrary to the footnote assertion regarding the presence or absence of "significant amounts," hexavalent chromium was not identified in any of the soil samples collected and analyzed for this analyte.

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1C	Third, it is not clear whether by using a cancer risk range of 10^{-4} to 10^{-6} to support its "No Further Action" determination DON/USMC is intending to allow unrestricted use of the property on which IRP Sites 7 and 14 are located. In this regard, the "Interim Policy on Land Use Controls Associated with Environmental Restoration Activities" ("LUC Policy"), issued by the United States Department of Defense ("DOD") on August 31, 2000, states that "LUCs [Land Use Controls] may be needed where containment or treatment of contaminants is not necessary to protect human health and the environment." [3] Thus, DON/USMC needs to discuss in the Proposed Plan whether its use of new standards[4] for evaluating cancer risks will necessitate the imposition of use restrictions on these two IRP sites.[5] [3] Of course, the LRA disagrees that allowing contamination presenting an excess cancer risk between 10^{-4} to 10^{-6} to remain at IRP Sites 7 and 14 would be protective of human health and the environment. [4] DON/USMC's use of a cancer "risk range" represents a marked departure from its approach at other IRP sites. For example, at IRP Site 11, DON/USMC agreed that any contamination would be remediated such that residual cancer risks would not exceed 10^{-6}. [5] Of course, as stated in the context of other remedial actions being conducted at this facility, the LRA strongly believes that land use controls are not an appropriate means of managing contamination at the MCAS El Toro property. Rather, such controls should be used only where a more permanent remedy is infeasible. See 40 C.F.R. § 300.430(f). In this instance, "[t]he extent of contamination at Sites 7 and 14 is confined to shallow soil (soil less than 10 feet below ground surface." Proposed Plan, p. 1. Thus, it is would not be infeasible or impractical to implement a more permanent remedy at these two IRP sites, if in fact DON anticipates using use restrictions to protect its "remedy." Furthermore, imposition of any land use controls on IRP Sites 7 and 14 would be antithetical to the obligations imposed under the Defense Base Closure and Realignments Acts of 1988 and 1990 ("BRAC") and the Comprehensive Environmental Response, Compensation and Liability Act ("CERCLA"). Discussed in detail in the comments submitted by the LRA in July 1998	It is the DON's intent to allow unrestricted use of the property at Sites 7 and 14 with the exception of any restrictions that may need to be imposed because of the presence of contaminated groundwater beneath both sites that originates at Site 24. The need for restrictions associated with groundwater will be discussed in the Proposed Plan for Sites 18 and 24. This Proposed Plan is expected to be issued to the public in 2001. As noted in the response to Comment 1A, although the proposed future reuse of Sites 7 and 14 is industrial (airfield), the DON has evaluated the conditions at Sites 7 and 14 through human-health risk assessments performed assuming both residential and industrial use scenarios and has determined that they are protective of human health and the environment under either future-use scenario. The basis for the risk management recommendation is presented in Table 2 of the Proposed Plan and further elaborated in the response to Comment 1A. Because the risks were evaluated and found to be acceptable under both residential and industrial scenarios, the property is considered available for unrestricted use. In making this risk management recommendation, the DON has not applied a "new standard" for evaluating risk different from that applied at Site 11. As discussed in the response to Comment 1A, the recommendation as to whether to perform remediation at a site where the risks fall between 10^{-4} and 10^{-6} is made on a site-by-site basis in accordance with criteria provided in the NCP. The risk management considerations for Site 11 were summarized in the table "Site-by-Site Summary: Risk Assessment Results and Recommended Actions," presented on page 5 in the Proposed Plan for this site. One of the primary factors in this recommendation was that the predominant chemicals present at Site 11 were polychlorinated biphenyls (PCBs). These chemicals are not naturally occurring and are persistent in the environment. Therefore, unlike the presence of arsenic and manganese at Sites 7 and 14, the presence of PCBs at Site 11 cannot be attributed to background conditions. In addition, PCBs do not readily biodegrade in soil like PAHs at Sites 7 and 14. Therefore, use of constant concentrations of PCBs over the 30-year period of the risk assessment

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	concerning the proposed remediation plan for the landfills at the MCAS El Toro property, these laws make clear that any remediation and restoration activities must be conducted in a manner that expedites and enhances beneficial reuse of the environmentally impaired site. DOD's LUC Policy likewise states that "[t]he goal is to facilitate community redevelopment efforts." LUC Policy, Attachment p.2.	is much more realistic than assuming that the concentrations of PAHs remain constant over this time. With regard to Footnote 4, the DON's evaluation of risks at Sites 7 and 14 does not represent a marked departure from the approach used at other MCAS El Toro IRP sites. Ten sites with risks in the range of 10^{-6} to 10^{-4} (e.g., 4, 6, 9, 10, 13, 15, 19, 20, 21, and 22) were evaluated in the OU-2A and OU-3A ROD, dated September 1997, and were found to require no further action. Further, the same risk evaluation approach was used at Sites 8, 11, and 12. At these sites human-health risks also fell within the range of 10^{-6} and 10^{-4}. In this case, the risks were evaluated on the basis of the site-specific data, and remedial action was recommended for several units. As noted in the response to Comment 1A, the DON is reevaluating the baseline human-health risk at Site 11 to determine whether remediation is required in view of current toxicity and exposure parameters. In addition, Footnote 4 to this comment mixes two separate issues pertaining to risk. They are 1) the 10^{-6} to 10^{-4} range used in the risk evaluation to determine if remedial action is required and 2) the risk threshold used to establish chemical-specific cleanup levels once the decision to take remedial action has been made. The residual cancer risk of 10^{-6} to which this footnote refers is associated with the cleanup level established for each chemical at Site 11 once the decision to proceed with remedial action was made.
	2. Many of the concerns discussed above are equally applicable to DON/USMC's conclusions regarding non-cancer risks presented by contamination at IRP Sites 7 and 14. There are significant data gaps concerning the nature and scope of non-cancer risks associated with contamination at these two sites, which counsel in favor of using a conservative approach to determine whether additional remediation is needed. Moreover, these gaps cannot be addressed merely by imposing restrictions on the permissible reuse of these IRP sites.	The DON does not agree that there are significant data gaps concerning the nature and scope of the noncancer risks. As discussed previously in the response to Comment 1B, the data collection efforts were designed to provide a high level of confidence (95 percent) that the number of locations and soil samples were appropriate to determine the nature and extent of contamination and to conduct a human-health risk assessment. As stated in the response to Comment 1C, the DON does not intend to impose restrictions on reuse of these sites.

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1E	Beyond this, the LRA is very concerned by DON/USMC's attempt to absolve itself of responsibility for contamination at IRP Sites 7 and 14 by segmenting the data. For several of the units within IRP Sites 7 and 14, DON/USMC notes that the risk drivers present include arsenic, manganese and polynuclear aromatic hydrocarbons ("PAHs"). However, DON/USMC then goes on to dismiss the risks posed by arsenic and manganese, claiming that these metals are naturally occurring and are not attributable to any historical activities at the base. And since the relative contribution of PAHs to the non-cancer risks present at IRP Sites 7 and 14 are less than one on the Hazard Index, DON/USMC asserts that no further action is warranted. As discussed in more detail in the attached memorandum, the LRA questions the accuracy of DON/USMCs claim that arsenic and manganese are naturally occurring and are not the result of its prior use of the MCAS El Toro property. However, even if this is true, DON/USMC cannot escape its responsibility to address contamination that poses a risk to human health and the environment, simply because its contribution to such contamination, standing alone, would not trigger the need for remediation. The fact remains that the non-cancer risks present at Units 1 and 3 of IRP Site 7 (1.4 and 1.0 on the Hazard Index, respectively) exceed the regulatory levels requiring remediation. PAHs are one of the constituents contributing to these risks and, as such, DON/USMC must take steps to address the contamination present at Site 7.	The DON does not agree with the LRA's statement that the DON/USMC is attempting to absolve itself of responsibility for contamination at IRP Sites 7 and 14 by segmenting the data. The methodology used to calculate the HI has been reviewed and approved by the U.S. EPA and DTSC and is designed to provide a reasonable maximum exposure. The methodology used to review the resulting noncancer risk has also been approved by U.S. EPA and DTSC and is the same methodology used at other BRAC bases to evaluate noncancer risks. The DON disagrees with the LRA's statement that "the non-cancer risks present at Units 1 and 3 . . . exceed the regulatory levels requiring remediation." U.S. EPA guidance (U.S. EPA 1989) states that "when the hazard index exceeds unity, there may be a concern for potential health effects." Noncancer risks do not automatically indicate the need for remediation because they equal or exceed 1. Rather, as noted in the Proposed Plan, such HI values indicate that a lifetime of exposure may have potential adverse health effects and should be evaluated further. Further evaluation takes into account, among other factors, historical activities that occurred at the site, the background levels of the chemicals that contribute to the risk, and persistence of chemicals in the environment. Background levels of chemicals are considered because it is not necessary to include naturally occurring inorganic chemicals (metals) in the risk assessment when the concentrations are within the range considered normal for the area. As explained on page O6-37 of the RI: > Under industrial conditions, the cumulative HI is less than 1.0. For residential land use, the HI equals or exceeds the threshold of 1 for Units 1 (HI = 1.4) and 3 (HI = 1.0). This exceedance is mainly due to manganese identified at 46 and 51 percent for Units 1 and 3, respectively. However, the levels of manganese at these two units are within background levels. The HI for manganese at Units 1 and 3 is only 1.4 and 1.1 times its HI at background. This indicates that the concentrations of manganese are not significantly different from background at the site. Therefore, noncancer hazards at these units are not considered significant.

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		Furthermore, per response to Comment 1A, hazard quotients presented are overestimates because they were calculated in accordance with Region 9 practice using an adult-derived inhalation toxicity criteria rather than child-derived toxicity criteria. Because some of the hazard quotients calculated in this manner exceeded 1, the DON performed a risk management evaluation considering factors that may have led to an overestimation of risk. The adult-derived inhalation toxicity factor was one such factor. Use of a child-derived inhalation reference dose, as suggested by DTSC toxicologist John Christopher, would have reduced the manganese hazard quotients by approximately 50 percent. Rather than reperform the calculation, this was discussed in the uncertainty portion of the RI.
1F	3. Failure to Consider Threats Posed by Petroleum Hydrocarbons One of the more glaring omissions in the Proposed Plan is any discussion of the threat posed by petroleum hydrocarbons, which were detected in many of the soil samples collected from IRP Sites 7 and 14. In fact, at IRP Site 7, total petroleum hydrocarbons ("TPH") as high as 32,091 kg/mg (3.2%) were detected, which is significantly in excess of the typical action levels established by the Orange County Health Care Agency for reuse of former oil production sites. Though not stated in the Proposed Plan, DON/USMC's decision to ignore these impacts appears to be based on CERCLA's "petroleum exclusion," under which crude petroleum and its fractions are excluded from the definition of a hazardous substance and, in turn, exempt from the strictures of this statute. However, any reliance on this exclusion is both short-sighted and misplaced. In light of the levels at issue, leaving petroleum hydrocarbons in place at IRP Sites 7 and 14 necessarily will impede reuse of these sites. Thus, even if DON/USMC has no obligation under CERCLA to remediate the petroleum hydrocarbons present at IRP Sites 7 and 14, it nonetheless does have a duty to address such contamination under applicable BRAC law.	While the U.S. EPA, DTSC, and California Regional Water Quality Control Board (RWQCB) concur with the DON recommendation for no further action at Sites 7 and 14, the RWQCB requested in its 26 February 2001 comment on the draft No Action ROD that the DON further investigate the 32,091 mg/kg total recoverable petroleum hydrocarbons (TRPH) concentration reported in surface soil at Site 7, Unit 5, location 07_GN1. The DON will comply with RWQCB's request and will address this concern under the Petroleum Corrective Action (PCA) Program. This information has been added to Section 5.2.3.7 in the ROD. This will not impact the no-action status of Site 7 under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). The Site 14 catch basin sediment sample was collected during the Phase I RI. The concrete catch basin was inspected visually during the Phase II RI and no sediment was present at that time. Because risks at the catch basin were within the range considered allowable (based on Phase I data), there was no sediment present at the time of the Phase II RI, and sampling at other Site 14 locations showed that TRPH and total petroleum hydrocarbons (TPH) in surface soil were either nondetect or present at low concentrations (and would therefore be unlikely to recontaminate the catch basin in the future), the DON concluded that no further action was required for this unit.

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	In addition, pursuant to Public Law 102-190, DON/USMC is required to indemnify the recipients of base property for any claims relating to or arising out of the release or threatened release of hazardous substances, pollutants, contaminants and petroleum products that occurred during its tenure on the property. Give this, it makes no sense for DON/USMC to defer consideration of the impacts associated with petroleum hydrocarbons at IRP Sites 7 and 14 until actual transfer of the MCAS El Toro property occurs, and doing so will only serve to delay this transition.	
1G	4. Concurrence of Regulatory Agencies The Proposed Plan emphasizes that the members of the Base Cleanup Team ("BCT"), which is composed of DON/USMC, EPA, DTSC and the Santa Ana Regional Water Quality Control Board ("Regional Board"), have concurred that the risks posed by contaminants at IRP Sites 7 and 14 are within the allowable or risk management/generally allowable range and, therefore, that "no further evaluations or cleanup actions are required." Proposed Plan, p. 6 First, the LRA is concerned that this section of the Proposed Plan does not accurately reflect the comments previously made by EPA and DTSC concerning the draft Proposed Plan and its supporting documents. For example, as noted above, EPA stated that excess cancer risks in the range of 10^{-4} to 10^{-6} "may not require remediation, depending on site-specific circumstances." DON/USMC cannot and should not claim that the contamination at IRP Sites 7 and 14 requires no further action without providing a full discussion in the Proposed Plan of the specific circumstances that justify deviating from the 10^{-6} risk standard. Similarly, DTSC stated in its comments on the draft Phase II Remedial Investigation ("RI") Report for IRP Sites 7 and 14 that it "does not consider 10^{-4} to 10^{-6} an acceptable risk range." Rather it "considers a one in one million or 10^{-6} as the point of departure for considering remediation of risks. See Letter from Alice Gimeno, Southern California Branch, Office of Military facilities, DTSC, to Dean Gould, BRAC Environmental Coordinator, USMC, dated November 8, 1999. Moreover, in none of the written comments submitted by DTSC on the	The DON disagrees with the implication that the Proposed Plan does not incorporate BCT comments or that the regulatory agencies do not support the no further action recommendation. The Proposed Plan accurately reflects comments from U.S. EPA and DTSC. Both regulatory agencies support the DON recommendation for no further action at Sites 7 and 14 as outlined in the Proposed Plan. As the comment acknowledges, U.S. EPA indicated in its review of the draft Phase II RI Report that risks within the range of 10^{-6} to 10^{-4} may not require remediation, depending on a variety of site-specific factors. As discussed in the response to Comment 1A, the DON and regulatory agencies considered factors provided in the NCP when they performed a point-of-departure evaluation before they arrived at the no further action recommendation. A summary of the rationale for the no action recommendation is in the response to Comment 1A and the Proposed Plan, "Characterizing Site Risks and Results" section (page 5). U.S. EPA, in Comment 22 on the draft Phase II RI Report, stated that "EPA recommends risks in the 10^{-6} to 10^{-4} range be carefully evaluated for remediation" and that "a more appropriate term for the 10^{-6} to 10^{-4} range would be the 'risk management range.' U.S. EPA considers a 10^{-6} risk as the point of departure for considering remediation of risks in this range." The draft final Phase II RI Report, the ROD, and the Proposed Plan use the U.S. EPA's recommended "risk management range" terminology. The comment from Alice Gimeno in the DTSC review of the draft Phase II RI Report (08 November 1999) made the identical point, stating "DTSC does not consider 10^{-4} to 10^{-6} an acceptable risk

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	draft Proposed Plan, does DTSC expressly rescind its prior comment on the RI report. Thus, if in fact DTSC has retreated from its prior position concerning what constitutes an acceptable cancer risk, then the rationale for this change must be discussed in detail in the Proposed Plan.	range. DTSC considers a one in one million or 10^{-6} risk as the point of departure for considering remediation of risks." Nowhere in U.S. EPA and DTSC comments or in regulatory guidance documents is 10^{-6} referenced as a "risk standard." Therefore, contrary to the LRA characterization presented here, the DTSC (and U.S. EPA) positions have remained consistent throughout the progression from RI to Proposed Plan. Risks within the range from 10^{-6} to 10^{-4} require evaluation of multiple site factors before a no further action or remedial action decision is made. The DON conducted the necessary evaluation, and recommended no further action, and the regulatory agencies concurred with the recommendations based on the evaluation results. With regard to the LRA's statement that the Proposed Plan should provide a full discussion of the specific circumstances that justify deviating from the 10-6 risk standard, the DON would like to point out that the Proposed Plan is prepared in a fact sheet format following U.S. EPA's recommended guidance (U.S. EPA 1999). The plan is intended to summarize the background of the sites, the results of the RI and risk assessment, and the rationale for taking or not taking remedial action in language that is clearly understandable to the public. The detailed backup for the recommendation whether to take or not to take action at the site is contained in the RI Report. Table 2 in the Proposed Plan is intended by the DON to convey the rationale for the no action recommendation in a format and language that would be easily comprehended by the public. It is not intended to substitute for the more detailed discussion in the RI and in the ROD.
1H	Second, the LRA is not aware of any formal comments submitted by the Regional Board on the draft Proposed Plan for IRP Sites 7 and 14. This absence of comments is surprising given the high levels of petroleum hydrocarbons detected at these sites and the potential for groundwater to be impacted by such contaminants. As above, it is imperative for DON/USMC to summarize the discussions it had with the Regional Board concerning IRP Sites 7 and 14 and to explain the reasons given by the Regional Board for concluding that no further action is warranted.	The RWQCB reviewed both the draft and draft final versions of the Proposed Plan and had no comments on either version. In the case of the draft Proposed Plan, California RWQCB representative Patricia Hannon indicated verbally during a 22 May 2000 meeting that RWQCB had no comments on the Proposed Plan. A subsequent 07 August 2000 letter from RWQCB pertaining to its review of the draft final Proposed Plan stated "We do not have significant comments on this document." RWQCB also reviewed the RI for Sites 7 and 14 and found that document acceptable.

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		As noted in the response to Comment 1F, the RWQCB later requested in its 26 February 2001 comment on the draft No Action ROD that the DON further investigate the 32,091 mg/kg TRPH concentration reported in surface soil at Site 7, Unit 5, location 07_GN1. The DON will address this request under the PCA Program. This will not affect the no-action status of Site 7 under CERCLA. As further noted in the response to Comment 1F, no sediment was observed in the Site 14 catch basin during the Phase II RI. Because there was no sediment present at the time of the Phase II RI, risks at the catch basin were within the range considered allowable (based on Phase I data), and sampling at other Site 14 locations showed that TRPH and TPH in surface soil were either nondetect or present at low concentrations (and would therefore be unlikely to recontaminate the catch basin in the future), the DON concluded that no further action was required for this unit.
1I	Third, even if some members of the BCT believe that no additional investigation or remediation of IRP Sites 7 and 14 is necessary, the LRA does not believe it is appropriate to emphasize this as part of the Proposed Plan. In doing so, DON/USMC is giving the impression that its decision on the Proposed Plan is a *fait accompli*. However, there is still the issue of the community's acceptance of the Proposed Plan, which is one of the criteria that must be considered in selecting a remedy, 40 C.F.R. § 300.430. As the ultimate recipient of the MCAS El Toro property, the County constitutes a key stakeholder in the community that will be affected by this transfer. As such, DON/USMC has a duty to fully address the concerns raised by the LRA in this letter and the attached memorandum. Again, we appreciate the opportunity to comment on the Final Proposed Plan for IRP Sites 7 and 14 and look forward to discussing our issues and concerns with you in more detail in the near future. In the interim, if you have any questions, please do not hesitate to contact Polin Modanlou of my staff at (714) 834-3156.	The statement regarding the BCT is meant to convey the current position of the regulatory agencies on the proposed remedy. This is not meant to imply that the final remedy is being selected without consideration of public comments. All public comments received during the public comment period are addressed in the Responsiveness Summary portion of the ROD and are taken into consideration in finalizing the remedy selection. As an example, the Navy's preferred alternative for remediation of landfill Sites 3 and 5 was a monolithic soil cap. This remedy was modified to a single-barrier cap with a flexible membrane liner, based on the public comments received during the public comment period on the Proposed Plan.

RESPONSIVENESS SUMMARY
MARINE CORPS AIR STATION – EL TORO, CALIFORNIA
PROPOSED PLAN, OPERABLE UNIT 3B, SITES 7 AND 14

Letters Received During Public Comment Period

Comments by: ***Bernard S. Palmer, Ph.D., P.E., GeoSyntec Consultants, in a Memorandum Dated 04 November 2000***

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2A	GeoSyntec Consultants (GeoSyntec) performed a preliminary review of two documents related to Sites 7 and 14 prepared by the Department of Navy/United States Marine Corps (DON/USMC). These documents are the "Phase II Remedial Investigation Report, Attachments O and P, Operable Units-3B, Sites 7 and 14, Marine Corps Air Station (MCAS), El Toro, California" (RI), dated March 2000 and the "Proposed Plan for Operable Unit 3B, Sites 7 and 14 at Marine Corps Air Station El Toro (Proposed Plan), dated September 2000. The RI provides a summary of the nature and extent of contamination at Operable Unit (OU)-3B, Site 7, Drop Tank Drainage Area No. 2 and Site 14, Battery Acid Disposal Area, and provides fate-and-transport and human-health risk assessments for chemicals of potential concern at these sites. The RI also includes recommendations for future work and potential remediation at these sites. The Proposed Plan is a summary of the work performed in the RI and is designed to be given to the public for comments before publication of the Record of Decision (ROD). The purpose of this memorandum is to provide a brief review of the information regarding Sites 7 and 14 included in the RI and Proposed Plan and to summarize GeoSyntec's comments, issues, and questions regarding the RI and Proposed Plan. [Background information on Sites 7 and 14 is not reproduced in this summary.] GeoSyntec noted a number of issues in the RI and in the Proposed Plan that need to be addressed by DON/USMC. In addition, GeoSyntec has a number of questions regarding issues discussed in the RI. Obtaining a response to these questions will help the MCAS El Toro Master Redevelopment Program (MRP) in planning reuse of MCAS El Toro. The following is the description of issues and questions identified by GeoSyntec.	The DON's responses to GeoSyntec's comments follow.

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2B	Issue/Concern No. 1 DON/USMC indicates that battery fluids from facility vehicles were drained onto the ground surface at Site 14. DON/USMC further states that the volume of battery acid (sulfuric acid) disposed at the site is estimated at 210 gallons (see RI at page P1-2). Battery acid has a very low pH. Therefore, the soil on which the battery acid was spilled would likely also have a low pH. Did DON/USMC test the soil and the groundwater for pH at Site 14? Did DON/USMC evaluate the impact of potentially low pH in the soil and groundwater on the presence and mobility of other contaminants (such as metals) in the vadose zone and groundwater?	The DON did not test the soil for pH at Site 14 because it consists of Sorrento loam. This soil is moderately alkaline and calcareous. These conditions in the near-surface soil horizons would effectively neutralize the battery acid disposed at this site between 1977 and 1983. The natural ability of the soil to effectively neutralize acid wastes disposed at this site is also evidenced in the condition of vegetation observed during numerous visual inspections. The grass that covers the site does not exhibit any evidence of stress that would occur if acidic soil conditions were present. The DON groundwater analyses did include measurement of pH. The results indicated that groundwater pH is neutral (6.8 to 7.2). Finally, analytical data collected during the RI do not suggest that the historical activities conducted at this site adversely impacted soil or groundwater. Metals concentrations in soil and groundwater are consistent with background levels, and groundwater pH is neutral rather than low (i.e., acidic).
2C	Issue/Concern No. 2 Figures 3-1 and 4-2 (see RI at pages P3-3 and P4-7, respectively) show two arrows labeled "acid disposal and paint waste stain area." It is unclear whether these arrows designate the area delineated by the blue dashed line or simply a smaller localized area at the end of the arrow. If the arrows designate a small-localized area, then, based on the sampling location shown in Figure 4-2 (see RI at page 4-7), no samples were collected specifically in the "acid disposal and paint waste stain area." Does DON/USMC intend to collect and chemically analyze soil samples at the "acid disposal and paint waste stain area" noted on Figures 3-1 and 4-2? In addition, could the soil below the pavement at Sites 7 and 14 and the soil next to the culvert that drains to Marshburn Channel at Site 14 have been chemically impacted? Does DON/USMC intend to collect and analyze soil samples at these locations? Generally speaking, it does not appear that the soil sampling locations at Sites 7 and 14 were selected based on the anticipated location of releases nor on the location of low topographic points where spilled liquids may have accumulated. Does DON/USMC intend to sample these areas?	The arrows refer to the entire area within the dashed blue lines and do not designate specific, discrete locations at the tip of each arrow. As the information in Figure 4-2 indicates, sampling was conducted throughout the entire area within the dashed blue lines because the entire area along the edge of the pavement south of Building 245 was reportedly used for waste disposal at Site 14 (i.e., no discrete disposal locations within the unit). The DON plans no additional sampling activities within these areas or beneath the pavement at Site 14. Building 245 and the associated asphalt adjacent to Site 14 were constructed prior to 1971. The disposal activities at this site occurred between 1977 and 1983. Therefore, there is no reason to expect that the area beneath the pavement would be contaminated. Similarly, waste disposal activities at Site 7 occurred along the edges of the concrete aircraft parking aprons. Sampling along the present and former apron edges was conducted during the RI. Samples were collected throughout the pavement edge areas where waste disposal activities were known to have occurred and along the adjacent drainage ditches (topographically low areas) at both sites.

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	In addition, the corresponding risk assessments do not make note of the lack of sample coverage in areas that had been used for waste disposal. This factor should have been a prominent topic in the characterization of uncertainties presented with risk estimates, since it is critical information for risk managers interpreting the significance of estimated risks in the context of a "No-Further-Action" recommendation. While the risk estimates based on sampled locations may be adequate for characterizing overall site risks, the inability to identify localized areas with potentially much higher concentrations (due to the lack of sampling) is a substantial limitation with regard to determining the appropriateness of future land uses in particular locations. As a specific example, in its responses to DTSC and EPA comments on the Draft RI and the final RI, DON/USMC has presented the highest soil lead concentration (931 mg/kg) observed at Site 14 as an outlier and not considered this as an indicator of the need for further evaluation or remediation. Dismissing such levels is premature in light of the uncertainty as to whether the lead concentrations in the specific locations where batteries were drained have been characterized.	The DON disagrees with the suggestion that the RI sampling efforts and coverage were insufficient. Within each unit at a site, the number of Phase II sampling locations (or the adequacy of the Phase I sample quantities) was based on human-health risks calculated using the analytical results from soil sampling performed during the Phase I RI, on the decision error limits set for the Phase II RI, and on the area encompassed by each site unit. This sampling strategy was designed to provide a high level of confidence (95 percent) that the appropriate number of samples was collected to determine the nature and extent of contamination and conduct a human-health risk assessment based on the most conservative (residential) use of each site unit. Sampling was conducted in conformance with these guidelines using a random sampling strategy. As noted earlier, random sampling was conducted because the review of historical records, information compiled from employee interviews, and visual inspections conducted at each site identified general areas (not discrete locations) throughout which disposal reportedly occurred (conditions particularly suitable for a random sampling approach). The BCT also concurred with the sampling methodology used at these sites. Further, risk assessment was conducted on a unit-specific basis, not the "overall site risks" that the comment implies. Although the lead concentration example discussed in this comment identifies Site 14, it is apparent from the specified concentration that it is actually in reference to Site 7, Unit 5. The risk to a resident receptor presented by lead in surface soil (0 to 2 feet below ground surface [bgs]) at Site 7, Unit 5 was assessed. Lead concentrations ranged from 1.5 to 931 mg/kg. Seven of the ten lead sample results were measured below 130 mg/kg. The remaining three were measured at 323, 495, and 931 mg/kg. The GeoSyntec comment regarding the 931 mg/kg lead result is taken out of context. The RI Report reference to this result as an "outlier" is on page O6-36, Section 6.5.8 of the Risk Analysis. This discussion refers to this result in terms of its fit into the statistical distribution of data. It does not in any way imply that the lead result was dismissed in assessing the need for further evaluation or remediation. Exposure to lead at Site 7, Unit 5 was assessed both with and without the

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		outlier. The risk from exposure to lead was evaluated on the basis of the average concentration, estimated at 191 mg/kg with the outlier included and at 109 mg/kg without it. Lead was assessed by comparing resulting blood lead concentrations (50th, 90th, 95th, 98th, and 99th percentiles) with the benchmark of 10 μg/dL, which has been established by U.S. EPA as a level below which the most serious effects of lead are unlikely to occur. In both cases (when the outlier was included and when it was not) the estimated concentrations of lead in the blood of the resident adult and child did not exceed this threshold value. Hence, potential adverse health effects from exposure to lead concentrations at Unit 5 are considered unlikely.
2D	Issue/Concern No. 3 Petroleum hydrocarbon was detected in many of the samples collected at Sites 7 and 14. For example, TPH concentrations as high as 32,091 mg/kg (3.2 percent) were detected in surface soil samples at Unit 5 of Site 7. Such TPH concentrations in surface soil typically have required site remediation (for example, typical TPH action levels established by the Orange County Health Care Agency for former oil production sites range from 100 to 1,000 ppm depending on location and site reuse). Does DON/USMC intend to remediate TPH-impacted soil at Sites 7 and 14?	Please see the response to Comment 1F. The DON has agreed to further investigate the elevated concentration of TRPH reported at Site 7, Unit 5, sample location 07_GN1 under the PCA Program. This information has been added to Section 5.2.3.7 in the ROD. This will not impact the no-action status of this site under CERCLA. The DON has no plans to perform further investigation at Site 14.
2E	Issue/Concern No. 4 DON/USMC states in the RI that arsenic is responsible for a large part (50 percent at Site 7 and 40 percent at Site 14) of the carcinogenic risks at Sites 7 and 14 (see RI at pages O7-5 and P7-2). DON/USMC adds that the arsenic concentrations at Site 7 are not attributable to known historical site activities and that Sites 7 and 14 may have a higher background concentration than the statistically calculated background concentrations of arsenic for MCAS El Toro. Has DON/USMC evaluated the potential for arsenic to originate from alloy additives used, for example, in battery grids (see Hawley's Condensed Chemical Dictionary, 11th Edition at page 98)? Similarly, has DON/USMC evaluated the potential for presence of arsenic in the pesticides and herbicides used at MCAS El Toro as part of base operations?	The DON reaffirms the RI conclusion that arsenic concentrations in soil at Sites 7 and 14 reflect natural background conditions in soil. This conclusion is fully supported by the data collected during the RI. At Site 7, approximately 98 percent (121 samples) of the arsenic analytical results are less than the statistically calculated background concentration for MCAS El Toro. The remaining 2 percent (3 samples) are slightly above background and appear to be indicative of the variation present in nature. Similarly, the data set from which the background value was derived also includes some values greater than the calculated background value. At Site 14, none of the arsenic concentrations exceed the 6.86 mg/kg MCAS El Toro background concentration. With regard to arsenic, MCAS El Toro Site 7 was historically used as a drop tank drainage area. In the northern and eastern portions of the site,

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	DON/USMC states in the RI (see RI at page O7-6) that manganese is responsible for the hazard index (HI) being greater than 1 at Unit 1, Site 14. DON/USMC states that manganese is present in background and is not attributable to MCAS El Toro activities. Has DON/USMC considered that presence of manganese could be associated with aviation activities because manganese is used in many metal alloys used in aviation and in welding and cutting torches used in repair or maintenance shops?	aircraft drop tanks were drained and washed on a concrete apron from approximately 1969 to 1983. The mixture of residual fuel and washwater reportedly drained off the edge of the concrete apron and onto the adjacent grassy area. Since arsenic is not a component of aviation fuel or washwater, arsenic was not identified as a site-related contaminant. As noted in the RI, it is possible that arsenic compounds may have been used during agricultural or pest control practices prior to construction and expansion of MCAS El Toro (when the area was primarily agricultural). It is also possible that pesticides or herbicides containing arsenic may have been used in small quantities throughout the station to control weeds, insects, and animals during the time the base was operational. However, such use of arsenic at Site 7 was not identified during the interviews or record reviews of the site, is not related to activities that took place at the site, and therefore does not represent an identifiable site contribution. Site 14 was used as a battery acid disposal area from 1977 to 1983. As noted by GeoSyntec, arsenic could be a site-related chemical at Site 14 because arsenic was used historically as a minor additive (0.01 to 0.5 percent) to lead in lead-acid storage batteries. Therefore, it is possible that a small amount of arsenic could have leached from a battery's lead plates into the battery acid. However, because the concentration of arsenic that was available to be leached was very low to begin with, potential arsenic contributions to soil contamination would be minimal. In addition, by the time Site 14 was active, use of arsenic in batteries was in decline due to the introduction of maintenance-free batteries in the 1970's (U.S. Department of the Interior, Bureau of Mines 1994). The lack of a substantive source of arsenic is consistent with the fact that all concentrations of arsenic reported at Site 14 were below background for MCAS El Toro. The GeoSyntec comment concerning the cumulative HI and manganese appears to confuse Sites 7 and 14. The cumulative HI at Site 7, Unit 1 exceeded 1 primarily due to manganese as indicated on page O7-6 in the RI. Conversely, the cumulative HI at Site 14 was less than 1 as indicated on page P7-5 in the RI. Manganese is not considered a site-related contaminant at Site 7, Unit 1. GeoSyntec suggests that manganese

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		concentrations reported in soil at Site 7, Unit 1 could be attributed to the fact that manganese is present in many metal alloys used in aviation and in welding and cutting torches used in repair or maintenance shops. While aircraft that parked intermittently on the concrete apron near Site 7, Unit 1 were undoubtedly constructed using metal alloys containing manganese, that simple fact alone has no direct correlation to manganese concentrations in soil. Site 7, Unit 1 was used for washing aircraft drop tanks. It was not used for servicing or maintaining aircraft nor were repair or maintenance shops where welding and cutting torches may have been used located at this unit. Similarly, manganese is not considered a site-related contaminant at Site 14. The GeoSyntec suggestion that manganese contamination could be associated with welding and cutting torches used in repair or maintenance activities conducted at Site 14 (a grass-covered dirt strip along the pavement edge and an adjacent drainage ditch) is not consistent with the historical use of this site for battery fluid disposal or with the data collected during the RI. The cumulative HI at Site 14 is less than 1, manganese was not identified as a risk driver for Site 14 during the RI, and the reported manganese concentrations in soil at Site 14 are consistent with background.
2F	Issue/Concern No. 5 DON/USMC calculated the excess cancer risk and the HI for Sites 7 and 14. The maximum cancer risk calculated by DON/USMC is 4.4×10^{-5} at Unit 1 of Site 14 for a future resident and the maximum HI is 1.4 for Unit 1 of Site 7 for a future resident. In previous documents, DON/USMC indicated that the acceptable excess cancer risk was 10^{-6} following site remediation (see Responsiveness Summary to Proposed Plan, Sites 8, 11, and 12, dated July 1999, at pages 3 and 4). Has DON/USMC modified the acceptable risk level to be used for remediation at MCAS El Toro? If so, why?	This comment mixes two separate issues pertaining to risk. They are 1) risks calculated for a unit or site based on a comprehensive risk assessment using data collected during field investigations and 2) the risk threshold used to establish chemical-specific action levels for a site cleanup. The DON has and continues to maintain a consistent position on these two distinct issues at MCAS El Toro. As the RI and the Proposed Plan indicate, unit-specific cancer risks in the range of 10^{-6} to 10^{-4} calculated during the RI do not automatically necessitate remedial action. Rather, such risks fall within the risk management range/generally allowable risk range where further, site-specific point of departure evaluation is required to determine whether remedial action is necessary. The criteria used by the DON in the point-of-departure evaluation are discussed in the response to LRA Comment 1A. In the case of Sites 7 and 14, on the basis of the point-of-departure

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		evaluation, the DON concluded that the risks present at both sites were acceptable and that no further action was necessary. At Sites 8, 11, and 12, human-health risks also fell within the range of 10^{-6} to 10^{-4}. In this case, the risks were evaluated on the basis of the site-specific data, and remedial action was recommended for several units. The excess cancer risk of 10^{-6} referred to in this comment is associated with the cleanup level established for each chemical at the site. As noted in the response to Comment 1A, the DON plans to reevaluate the baseline human-health risk at these sites to determine whether remediation is required in view of current toxicity and exposure parameters.
2G	Issue/Concern No. 7 Given that some of the calculated risks for Sites 7 and 14 exceed standard threshold for non-cancer risks and reach to within approximately a factor of two (i.e., 0.44×10^{-4}) of the least conservative end of the "risk management" range for excess cancer risk (10^{-6} to 10^{-4}), the approach of using a single media (soil) risk assessment gives rise to significant uncertainties with regard to supporting a recommendation of no further action. In previous reviews of the RI, DTSC has pointed out that risks from all pathways should be accumulated to present an overall estimate of potential site risks. This would include potential risks from groundwater. DON/USMC has responded that groundwater risks are evaluated under a separate assessment. Under this approach, however, overall risks at Sites 7 and 14 are not disclosed to decision-makers evaluating these particular locations for future uses. The relative "closeness" of the overall soil risk estimates to the least conservative "risk management" criterion indicates that it would not take much additional contribution from omitted pathways to potentially change risk management recommendations. Does DON/USMC intend to evaluate total risk (i.e. risk including all potential pathways) for Sites 7 and 14?	The DON does not intend to evaluate the contribution of groundwater to risk at Sites 7 and 14 because, as the fate and transport analyses in the RI for Sites 7 and 14 indicate, downward contaminant migration to groundwater is a negligible potential contaminant migration pathway, and the RI data clearly indicate that historic activities at these sites did not impact groundwater. Contaminated groundwater present beneath these sites is associated with Site 24 and is being addressed as part of the remedial action for that site. The Site 24 groundwater plume was not considered during the Sites 7 and 14 risk assessments because it does not originate at these sites and because a pathway for exposure to contaminated groundwater is not available now and is expected not to be available in the future. Remedial action for groundwater will be addressed in the ROD for Sites 18 and 24. All remedial alternatives for groundwater at Site 24 (with the exception of the no-action alternative required by the NCP as the basis of comparison with the remaining alternatives) contain institutional controls preventing extraction or use of groundwater without DON approval until cleanup goals (maximum contaminant levels) are achieved. Prohibitions on extraction of groundwater would sever the potential exposure pathway and eliminate risks associated with this medium. The assumption that prohibitions on use of groundwater will render this pathway incomplete was discussed with the BCT, and concurrence was received to not evaluate risks that are due to groundwater in the Site 7/14 RI.

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2H	Issue/Concern No. 8 Other factors in the risk assessments noted to create uncertainties leading to underestimates of potential risks have been pointed out earlier by DTSC. This review provides additional questions/concerns related to other similar uncertainties. The handling of indications of elevated lead concentrations was mentioned above. In addition to such questions about localization of lead impacts, the issue of the protectiveness of other measured concentrations still has not been clearly resolved. The results of CAL-EPA LeadSpread model presented by DON/USMC indicate that a remedial goal of 290 mg/kg would be needed to maintain 99% confidence that children's blood lead would not exceed regulatory criteria. It is not just one potential outliers, but 3 of 10 (30%) of the measured values that exceed this remedial goal. Thus, children's exposures at 30% of the locations evaluated could lead to unacceptable blood lead levels. So, while from the perspective of overall site risks, measured lead levels may not be expected to result in significant risks, the picture at a substantial proportion of individual locations may be much different. Indeed, with uncertainties regarding the characterization of specific waste disposal locations, the areas with the highest risks may not even be identified. These area-specific issues are important from the perspective of evaluating future uses for particular areas.	The issue of elevated lead concentrations is discussed in the response to Comment 2C. As that response indicates, three lead concentrations in surface soil at Site 7, Unit 5 were greater than 130 mg/kg. However, per U.S. EPA guidance, exposure is not evaluated on the basis of single samples because that is considered unrealistic and is not representative of site conditions. The accepted methodology is to assess exposure on the basis of estimates of the central tendency of the data set rather than on the individual data points. In accordance with U.S. EPA Risk Assessment Guidance for Superfund (U.S. EPA 1989), the 95 percent UCL of the mean measured concentrations for each site unit is used as the EPC. U.S. EPA specifies that the 95 percent UCL is to be used in risk assessments because of the uncertainty associated with any estimate of the exposure concentration based on a single sample value. The goal of this approach is to quantify the most intense level of exposure that may reasonably be expected to occur (i.e., reasonable maximum exposure). Furthermore, it is completely unrealistic to base potential exposures on the assumption that an adult or a child would remain stationary for the 30-year duration of the residential risk scenario, spending the entire time at specific discrete locations that represent the highest reported sample concentrations within a site unit (i.e., the exposure scenario suggested in this comment). Per U.S. EPA, the realistic scenario used for the Sites 7 and 14 risk assessments assumes that adults and children will move throughout the unit area during that 30-year period and, as a result, their potential exposure would represent an upper bound on the mean of the contaminant concentrations distributed throughout that area (i.e., 95 percent UCL). Rather than a remedial goal, the 290 mg/kg value cited by GeoSyntec in this comment is the 99th percentile estimate of the concentration of lead in soil that, when combined with estimated concentrations of lead in air, respirable dust, and water, would produce a net blood lead concentration of 10 µg/dL (i.e., 10 µg/dL is the risk benchmark value). A 95th percentile estimated concentration (585 mg/kg) is also calculated by the model. What is important to note is that both of these estimated soil concentrations are highly dependent on the assumed contributions from the other media used as inputs to the model. Because the blood lead

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Comments by:	*Bernard S. Palmer, Ph.D., P.E., GeoSyntec Consultants, in a Memorandum Dated 04 November 2000*	
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		concentration is based on the combined contributions from air, water, soil, and dust, increasing the concentrations of one or more of these media (i.e., using conservative estimates) would decrease the allowable concentrations from other media necessary to obtain the 10 µg/dL benchmark. For the DON's Sites 7 and 14 risk assessments, the estimated lead concentration input values used for air and water are the Cal-EPA model defaults, which are very conservative estimates. For example, the 15-µg/L value used as the input for water is the California action level for lead in drinking water. This action level is 30 times greater than the concentration of lead actually present in drinking water distributed by the Orange County Water District (0.50 µg/L). Simply changing this one default model input value, substituting the actual lead concentration reported in drinking water for the more conservative California action level used by the DON, would increase the 99th percentile lead concentration for soil from 290 to 516 mg/kg and the 95th percentile concentration from 585 to 811 mg/kg. In terms of blood lead concentrations, changing only the value of this single input parameter would reduce the calculated blood lead concentrations for an adult by approximately 40 percent and for a child by approximately 23 percent, indicating that the actual risk from lead is lower than the estimates used by the DON for the Sites 7 and 14 risk assessments. The DON never specified a remedial goal for lead in the RI of 290 mg/kg or any other concentration. As noted in the previous paragraph, the 290 mg/kg value cited by GeoSyntec, a value calculated by the Cal-EPA pharmacokinetic model (Lead Risk Assessment Spreadsheet), is not a remedial goal nor did the DON use this number when evaluating the risk presented by lead. As Sections 6.3.6 in Attachments O and P of the RI indicate, assessment of the risk presented by lead was a two-step process. First the EPCs for lead in shallow and surface soil were compared to the established residential and industrial PRGs, respectively. For shallow soil, the EPC was compared to the residential Cal-EPA PRG of 130 mg/kg instead of the residential U.S. EPA PRG of 400 mg/kg to assure a stringent, more conservative approach. For surface soil, the EPC was compared to the industrial U.S. EPA PRG of 1,000 mg/kg. If the EPC exceeded the PRG, the Cal-EPA pharmacokinetic model was used to calculate the 50th, 90th, 95th, 98th, and 99th percentile blood lead

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		concentrations for an adult and a child. These calculated blood lead concentrations were then compared to the benchmark concentration of 10 µg/dL.
2I	Issue/Concern No. 9 Excluding potential carcinogenic risks from chromium also leads to unaddressed uncertainties and would lead to underestimates of potential risk. In the risk assessment, DON/USMC uses the justification that samples analyzed from other sites have not contained a significant proportion of the carcinogenic (hexavalent) form of chromium. Absent site-specific information on chromium speciation, the default requirement for risk assessment is to treat the entire concentration as the more toxic, carcinogenic form. The use of sampling results from other sites to support an alternative assumption that none of the chromium is in the hexavalent form is subject to considerable uncertainty for sites where metals were directly disposed. There is clear potential for the chromium found at battery acid disposal sites and tank washout sites to differ from other types of sites and natural background with regard to the proportion of chromium in the hexavalent form. This is the reason that site-specific measurement is typically required to support reducing the fraction considered carcinogenic in risk assessment. Since the risk assessments considered none of the chromium to be carcinogenic, there was no discussion of the potential risks or the uncertainty of the approach that was used.	The DON did not ignore hexavalent chromium during the risk assessment as implied by this comment. A hexavalent chromium evaluation was conducted during the OU-3 RI. The results are summarized in Section 4 of the OU-3A RI Report. The evaluation is referenced in Section 6.1.2 of Attachment O (page O6-3) for Site 7 and Attachment P (page P6-2) for Site 14. The hexavalent chromium investigation was conducted at the request of the regulatory agencies following their review of total chromium concentrations reported during the Phase I and Phase II field investigations. Samples were collected at locations throughout MCAS El Toro (including one sample from Site 7), including several locations where the highest total chromium concentrations in soil had been reported. The DON, U.S. EPA, DTSC, and RWQCB jointly selected the locations and number of samples included in the evaluation. Because hexavalent chromium was not identified in any of the samples included in this evaluation, the regulatory agencies concurred that further sampling or consideration of hexavalent chromium for risk assessment was not necessary. In addition, hexavalent chromium is not expected in the absence of a continuing source because it is inherently unstable in the natural environment and reduces rapidly to the noncarcinogenic trivalent form in the surface or near-surface environment.

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2J	Issue/Concern No. 10 The potential uncertainties associated with using a depth interval from 0 to 10 feet, inclusive, for estimating potential residential risks were raised by DTSC. The risk assessments used all of the results obtained from various depths down to 10 feet in estimating the average (mean) and subsequent 95% upper confidence limit of the mean used to represent potential exposure. Since the RI points out that the highest concentrations were measured near the soil surface, including results from deeper samples (0 to 10 feet) tends to "average out" the concentrations used for residential exposures. Some comparisons between the exposure point concentrations (EPCs) calculated for 0 to 2 foot soils at Site 7 Unit (See RI at Table I1-6) versus those for 0 to 10 feet soils (See RI at Table I1-7) are illustrative as shown below: **Chemical** — **Shallow EPC** — **Deep EPC** Arsenic — 6.98 mg/kg — 4.9 mg/kg Benzo(a)pyrene — 1.39 mg/kg — 0.36 mg/kg Benzo(a)anthracene — 1.09 mg/kg — 0.26 mg/kg Dibenz(a,h)anthracene — 0.62 mg/kg — 0.35 mg/kg Note that the corresponding risk estimates for 0 to 2 feet soil would have been higher than those presented for future residents by approximately 30% for arsenic, approximately four-fold for benzo(a)pyrene, and approximately two-fold for benzo(a,h)anthracene. In response to DTSC's comment on the RI on this issue, DON/USMC points out that an approved work plan stipulated that future residential exposures would assume exposure to soil mixed over the 0 to 10 foot depth interval. While this is a standard assumption with regard to soils that may be excavated, turned, and mixed in the process of installing a building with a basement, the applicability of this scenario to future land uses is not clear. Unless activities involving such soil mixing are necessary (or mandated), it is difficult to ensure that future users would not be exposed to the surficial concentrations. Failing to estimate such surficial soil risks for potential future residents limits the information available to decision-makers with regard to the suitability of certain future uses.	The DON used a 0- to 10-foot-bgs depth interval for evaluating residential risk because this is the standard that U.S. EPA Region 9 and DTSC suggest for residential risk. The rationale is that soil down to 10 feet bgs may be disturbed and brought to the surface during grading, construction, and installation of utilities. Although a 2-foot interval in this particular case may be more conservative, it would not change the order of magnitude of the total risk or modify the DON's conclusions about the need for further action at these sites. The soil interval from 0 to 2 feet was used in calculating the industrial risk for Sites 7 and 14 because this is the standard that U.S. EPA Region 9 and DTSC suggest for industrial risk. The results of this evaluation are in the RI Report and Proposed Plan. Although the risk assumptions are different for residential and industrial and these two values cannot, therefore, be compared directly, the industrial was lower than residential risk at all units.

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2K	CONCLUSIONS The ultimate conclusion of the RI (see RI at pages O7-9 and P7-8) and the Proposed Plan (see Proposed Plan at page 5) is that no further action is required at either Site 7 or 14. This conclusion appears to be based, in part, on the following assumptions by DON/USMC: • The excess cancer risk is less than 10^{-4}. • Arsenic and manganese are naturally occurring. However, an excess cancer risk of 1×10^{-6} historically has been used as the standard for residential risk at the MCAS El Toro. A no-further-action approach at Sites 7 and 14 would leave a residential excess cancer risk greater than 10^{-6}. In addition, one of the risk drivers, arsenic, in fact, may not be naturally occurring at Sites 7 and 14 as assured by DON/USMC. Further, non-cancer risks were above the threshold HI of 1 that is typically the trigger for further evaluation or remediation. And there were clearly areas of lead contamination substantially exceeding both the default CAL-EPA residential criterion and the remedial goals calculated in the site-specific risk assessment. The limitations and readily identifiable factors that may result in the reported risk estimates underestimating potential risks for these sites under certain future uses means that risk management decisions should make use of the risk assessment finding conservatively. Finally, it appears that concentrations of TPH well in excess of typical action levels are present at Sites 7 and 14. In light of these factors, DON/USMC's conclusion that no remediation of Sites 7 and 14 is required does not appear to be valid and, therefore, must be re-evaluated.	It is accurate to state that the ultimate conclusion of the RI, which underwent public and regulatory agency review, is that no further action is required at either Site 7 or 14. This conclusion is based on a point of departure evaluation using site-specific criteria as mandated by the NCP. The primary factors that were considered in the point-of-departure evaluation for Sites 7 and 14 were the background level of contaminants, the ability to monitor and control movements of contaminants, and the reliability of exposure data. These factors are discussed individually in the response to Comment 1A. Based on the results of the point-of-departure evaluation, the conclusion was reached that the risks present at Sites 7 and 14 are acceptable without further action. It is not correct to state, however, that an excess cancer risk of 10^{-6} has historically been used as a standard for residential risk at MCAS El Toro. As noted in the response to Comment 1C, several sites with risks exceeding 10^{-6} (e.g., Sites 4, 6, 9, 10, 13, 15, 19, 20, 21, and 22) were evaluated in the OU-2A and OU-3A ROD, dated September 1997, and were found to require no further action. For responses to additional concerns regarding arsenic, HI in excess of 1, lead, and TPH, please see the responses to Comments 2E, 1E, 2C, and 2D, respectively. The DON recognizes and appreciates the effort spent in the preparation of these review comments. The DON trusts that our responses to your questions will communicate that the RI was conducted in a comprehensive and thorough manner that recognized the important factors present at Sites 7 and 14 and that the subsequent recommendation for no further action is a technically sound, regulatory-agency-supported risk management decision.

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U.S. EPA. *See* United States Environmental Protection Agency.

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ATTACHMENT A

TABLES

Attachment A

Table 1
Contribution of Arsenic to Carcinogenic Risk in the Industrial Scenario

Site and Unit	Total Site Risk[a]	Risk Due to Arsenic	Background Risk Due to Arsenic	Incremental Risk Due to Arsenic
Site 7				
Unit 1	1.3×10^{-5}	2.4×10^{-6}	6.8×10^{-7}	1.7×10^{-6}
Unit 3	2.7×10^{-6}	9.9×10^{-7}	6.8×10^{-7}	3.1×10^{-7}
Unit 4	3.0×10^{-7}	NA[b]	NA[b]	NA[b]
Unit 5	3.4×10^{-6}	1.3×10^{-6}	6.8×10^{-7}	6.2×10^{-7}
Site 14				
Unit 1	6.5×10^{-6}	1.9×10^{-6}	6.8×10^{-7}	1.2×10^{-6}
Catch Basin	1.0×10^{-7}	NA[b]	NA[b]	NA[b]

Notes:
[a] the value shown is the higher of the U.S. EPA or Cal-EPA carcinogenic risk and represents the sum of the contributions from all COPCs
[b] arsenic was not a COPC at this unit

Acronyms/Abbreviations:
Cal-EPA – California Environmental Protection Agency
COPC – chemical of potential concern
NA – not applicable
U.S. EPA – United States Environmental Protection Agency

Table 2
Contribution of Arsenic to Carcinogenic Risk in the Residential Scenario

Site and Unit	Total Risk[a]	Risk Due to Arsenic	Background Risk Due to Arsenic	Incremental Risk Due to Arsenic
Site 7				
Unit 1	3.3×10^{-5}	1.3×10^{-5}	5.2×10^{-6}	7.8×10^{-6}
Unit 3	1.7×10^{-5}	7.7×10^{-6}	5.2×10^{-6}	2.5×10^{-6}
Unit 4	1.7×10^{-6}	NA[b]	NA[b]	NA[b]
Unit 5	2.2×10^{-5}	9.3×10^{-6}	5.2×10^{-6}	4.1×10^{-6}
Site 14				
Unit 1	4.4×10^{-5}	1.4×10^{-5}	5.2×10^{-6}	8.8×10^{-6}
Catch Basin	6.2×10^{-7}	NA[b]	NA[b]	NA[b]

Notes:
[a] the value shown is the higher of the U.S. EPA or Cal-EPA carcinogenic risk and represents the sum of the contributions from all COPCs
[b] arsenic was not a COPC at this unit

Acronyms/Abbreviations:
Cal-EPA – California Environmental Protection Agency
COPC – chemical of potential concern
NA – not applicable
U.S. EPA – United States Environmental Protection Agency

RESPONSE TO COMMENTS RECEIVED AT THE PUBLIC MEETING

RESPONSIVENESS SUMMARY
MARINE CORPS AIR STATION – EL TORO, CALIFORNIA
PROPOSED PLAN, OPERABLE UNIT 3B, NO FURTHER ACTION SITES 7 AND 14

Comments Received During Public Meeting Held 25 October 2000

Comments by: ***Dr. Charles Bennett, MCAS El Toro RAB Subcommittee Chair***

Number	Comments	Responses
1a	In a gas station cleanup, where the soil [contamination] was greater than ten thousand parts per million, would that be – would the closure of that be dependent upon a risk assessment, as we see here, or are there other criteria at play for that kind of remediation? Or either of our other people. I'm using that as an example, because it's really a California-driven thing, when you're talking about closing gas stations. So it may not be as easily answered by the – The question would [relate] more to 7 and 14, but it was looking at criteria being used and applied to 7 and 14 and comparing it to other sites that might have similarities.	The California Regional Water Quality Control Board (RWQCB) does not apply fixed, uniform cleanup criteria to all petroleum-impacted sites. Rather, RWQCB evaluates the necessity for cleanup and the requirements for site closure on a case-by-case basis. In this case, Sites 7 and 14 are subject to cleanup in accordance with Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and National Oil and Hazardous Substances Pollution Contingency Plan requirements, which require a risk assessment to evaluate potential impacts to human health. Petroleum hydrocarbons, such as gasoline, diesel, and motor oil, are complex mixtures that include hundreds of constituents, many of which cannot be quantified using available analytical techniques. The risk associated with petroleum hydrocarbons is calculated on the basis of the contributions from each of the constituents. That is, when the risk is assessed, the evaluation addresses the constituents included in petroleum (e.g., benzene and toluene) but not a generalized petroleum compound itself (e.g., gasoline), which would not have established health-based risk criteria. California Environmental Protection Agency (Cal-EPA) Department of Toxic Substances Control (DTSC) and RWQCB recognize that some of the constituents cannot be quantified and that toxicological information is not available for all constituents, but they are confident that the risks associated with petroleum hydrocarbons can be adequately estimated by assessing their most toxic constituents as was done in the risk assessment for Sites 7 and 14. In addition to risk, a major factor in cleanup decisions is also the likelihood of impact to groundwater quality. The DON's recommendation that no action be required at Sites 7 and 14 was also based on the fact that the data collected during the RI indicated that the very low levels of contaminants present at the site have limited lateral and vertical extent with no potential to impact groundwater.

Comments Received During Public Meeting Held 25 October 2000		
Comments by:	*Dr. Charles Bennett, MCAS El Toro RAB Subcommittee Chair*	
Number	**Comments**	**Responses**
1b	How were the COCs chosen, or selected?	Soil at Sites 7 and 14 was analyzed for a broad range of chemicals based on the historical use of these sites as a drop tank drainage area and a battery acid disposal area, respectively. Based on the historical use, soil at both sites was analyzed at a fixed-base laboratory during the remedial investigation (RI) for volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), total petroleum hydrocarbons (TPH), total recoverable petroleum hydrocarbons (TRPH), polynuclear aromatic hydrocarbons (PAHs), pesticides/polychlorinated biphenyls (PCBs), target analyte list (TAL) metals, and total organic carbon. Some soil samples from Site 7 were also screened in the field for VOCs, TPH, and PAHs. All of these chemical analyses were established in the RI Work Plan, which was reviewed and approved by the regulatory agencies. Based on the results of these analyses, several analytes were identified as chemicals of potential concern (COPCs) at the sites. Selection of COPCs included in each risk assessment was a multistep process. First, all chemicals that were identified in at least one sample were selected as COPCs. Then inorganic nutrients (calcium, magnesium, potassium, and sodium) known to be trace elements were eliminated as COPCs. Finally, a statistical comparison was performed and metals that were identified at background levels through the statistical comparison were also eliminated as COPCs.
1c	In regards to my earlier questions with COCs – This is not a question. My concern is not for sins of commission; it's for sins of omission. And the concern is whether there have been species that have been neglected, for one reason or another. I'm quite confident that your risk assessment is correctly done, soundly done, by standard methods, particularly because they indicate that the manganese and the arsenic are drivers. And my concern is there may be other things that, for reasons I don't completely understand why, are not included as potential contaminants of concern, and the methods that were used to say what's there and what was not there.	As noted in this response to Comment 1b, soil at Site 7 was analyzed for a broad range of chemicals, including VOCs, SVOCs, TPH, TRPH, PAHs, pesticides/PCBs, TAL metals, and total organic carbon. The DON is confident that the analyses that were performed were sufficient to identify any chemicals of concern likely to be present. Chlorinated solvents in particular would have been identified and reported, if present, as part of the various VOC analytical methods used during the RI. These methods, identified in the final RI Report for Sites 7 and 14, included the U.S. EPA CLP OLM 01.5 and Methods 8010/8020 and 8021B.

Comments Received During Public Meeting Held 25 October 2000		
Comments by:	*Dr. Charles Bennett, MCAS El Toro RAB Subcommittee Chair*	
Number	**Comments**	**Responses**
	Specifically, my concern is in the analysis at Site 7, at Unit 4 and at Unit 1, was adequate testing done to determine the presence of other potential contaminants of concern? These would include, obviously, the chlorinated solvents that could have been in those areas. There were small amounts of samples that showed these things present. And they – I do not know whether they were put into the computation for the risk assessment or not. So, that is my comment.	All chlorinated solvents reported in soil samples were included in the risk assessment. SVOCs, PAHs, and pesticides/PCBs were also included. As the response to Comment 1a indicates, the petroleum hydrocarbons are addressed on the basis of the individual constituents (e.g., VOCs and PAHs) that make up each hydrocarbon mixture.
1d	I'm looking at specifically Unit 1 of Site 7. And the analysis on Table 4-2 of the RI/FS – or, appears to be RI/FS, regarding TRPH analysis. TRPH is total recoverable hydrocarbons. And there were values on the surface of the drainage ditch of TRPH over 3,000 parts per million. Now, what that indicates is that petroleum hydrocarbons went down the drainage ditch. And Don is absolutely right, the drainage ditch feeds into the Agua Chinon. So what the data shows, there are high hydrocarbons that could lead from Site 7 to Site 25, the drainage ditch. But I'm supporting his position in that regard. Really, that's just a comment on the data at hand.	Unit 1 at Site 7 is the North Pavement Edge. As noted, TRPH was reported at Unit 1 in surface soil at concentrations over 3,000 parts per million (equivalent to the mg/kg units used in the RI). However, no TRPH concentrations "over 3,000 parts per million" were reported for any samples collected along the drainage ditch. (Unit 4, rather than Unit 1, is the drainage ditch at Site 7.) At Unit 4, TRPH was identified only in a single sample at a reported concentration of 206 parts per million. Because TRPH was reported in the drainage ditch in only one sample at a relatively low concentration, the DON concluded that TRPH migration is not occurring from Site 7 to Site 25.
1e	This public meeting is a step forward from the previous public meeting. It's allowed a degree of interaction that is an improvement on the past ones.	The Base Realignment and Closure (BRAC) Cleanup Team (BCT) modified the format of this meeting from a display type of meeting to a more interactive meeting in response to comments from the public. The BCT appreciates the number of comments that were received from the public as a result of the format change and hopes for increased public participation at future public meetings.

Comments Received During Public Meeting Held 25 October 2000		
Comments by:	*Mr. Jerry Werner, MCAS El Toro RAB Member*	
Number	**Comments**	**Responses**
2a	Question is – There's another obvious method of ingestion. And this would be from a vegetable garden, where the contaminants would get into the food supply that a person would have. Has that been considered in the risk assessment?	The exposure pathways evaluated in the risk assessment are considered to be the primary/most likely pathways of exposure. Minor or secondary pathways often cannot be accurately estimated from available data and were not included in the exposure calculations. The contribution of these secondary routes to the overall risk is not likely to be significant. Plant uptake exposures, in particular, were addressed in the RI Report on pages O6-57 and P6-33. But they were not included in the risk assessment calculation because of the large degree of uncertainty associated with this pathway and the fact that the primary exposure pathways were already addressed. The decision to not address plant uptake was discussed with DTSC toxicologist John Christopher who agreed with the DON's approach. A discussion of the rationale follows. Bioconcentration factors used to estimate aboveground and belowground plant uptake of COPCs could potentially overestimate the COPC concentration in plant tissues, thus overestimating the resultant risk. The bioconcentration factors for aboveground and belowground plants assume that a plant raised on chemically contaminated soil will absorb COPCs through its roots, and COPCs then become distributed throughout the body of the plant. However, few data exist concerning bioconcentration of COPCs, and equations used to estimate bioconcentration of COPCs in plants are based on two small data sets that may not accurately represent actual bioconcentration in home gardens. Algorithms relating chemical uptake by plants to the log K_{ow} (octanol-water partitioning coefficient) of each compound have been developed. However, these algorithms may overestimate actual COPC concentrations in plant tissues because they do not take biotransformation and/or chemical elimination into account. Consequently, uncertainty does exist and could result in the overestimation of risk.
2b	For the record, are you contemplating any land-use controls over the restrictions of the use of property?	No land-use controls are required for Sites 7 and 14 as a result of site-related contamination. Although shallow groundwater underlying these sites is contaminated by VOCs, including trichloroethene, carbon tetrachloride, and tetrachloroethene at Site 7 and trichloroethene and carbon tetrachloride at Site 14, remedial investigations have shown that the contamination present in groundwater does not originate from Sites 7 or 14 but lies within the Site 24, Volatile Organic Compound Source

Comments Received During Public Meeting Held 25 October 2000		
Comments by:	*Mr. Jerry Werner, MCAS El Toro RAB Member*	
Number	**Comments**	**Responses**
		Area, groundwater plume. Groundwater cleanup, including use restrictions that prohibit drilling of wells and/or extraction of groundwater and allow access for groundwater monitoring and maintenance of equipment associated with groundwater remediation, will be addressed in the Proposed Plan and Record of Decision (ROD) for Sites 18 and 24. If such controls are necessary, the DON will work with the future owners of the property to minimize the impact of the controls on future land development.
2c	With respect to the issue of the Record of Decision that goes along with a no further action, is that sort of the last step that needs to be taken before property transfer, or are there some additional steps beyond the Record of Decision?	There are several additional steps beyond the no further action ROD when property is being transferred. First, a Finding of Suitability for Transfer (FOST) is prepared to document the conclusion that real property made available through the BRAC process is environmentally suitable for transfer by deed under Section 120(h) of CERCLA. The FOST is reviewed by the regulatory agencies, revised as appropriate on the basis of review comments, and then signed by the DON. The regulatory agencies and the public are notified of the intent to sign a FOST at least 30 days prior to transfer of the property. Once the FOST has been signed, the DON conducts negotiations with the transferee to convey the property by deed.
2d	One last one, I think. What is the correlation between the chemical levels in the soil and the concentration plugged? I assume the ultimate question will tell the effect on the mortality is related to the concentration as measured in the blood sample. Is there – What's the correlation?	The exposure-point concentration (EPC) (i.e., the concentration plugged into the risk assessment) is the concentration of a chemical in the contaminated medium (e.g., soil). Under reasonable maximum exposure conditions, U.S. EPA specifies using the 95 percent upper confidence limit (UCL) of the averaged measured chemical concentrations (i.e., "the chemical levels in the soil"). Under certain conditions, the maximum reported concentration in soil for selected chemicals is used as the EPC rather than the 95 percent UCL. The maximum concentration is used when 1) the 95 percent UCL of a chemical exceeds its highest measured concentration and 2) the chemical is infrequently detected. As discussed in the risk assessment for each site, lead is the only chemical that is evaluated in relation to the concentration measured in blood. That evaluation is performed using the Cal-EPA pharmacokinetic model (Lead Risk Assessment Spreadsheet), and the lead concentration in blood is compared to the acceptable concentration of 10 μg/dL.

Comments Received During Public Meeting Held 25 October 2000		
Comments by:	*Mr. Jerry Werner, MCAS El Toro RAB Member*	
Number	**Comments**	**Responses**
		All other chemicals are evaluated on the basis of toxicological effects they are capable of producing in humans. Based on the toxicological effects, chemicals fall into two categories: those that could potentially cause cancer (carcinogens) and those that cause other types of health effects, e.g., liver damage (noncarcinogens). Carcinogenic risks are measured in terms of probability of contracting cancer. A cancer risk probability of 1×10^{-6} means that the estimated increase in an individual normal or baseline cancer risk is no greater than one in a million for a lifetime of exposure and may be considerably less. Noncarcinogenic risks are measured in terms of a hazard index (HI). An HI value of 1 indicates that lifetime exposure has a limited potential for causing an adverse effect in sensitive populations.

Comments Received During Public Meeting Held 25 October 2000		
Comments by:	*Mr. Don Zweifel, MCAS El Toro RAB Member*	
Number	**Comments**	**Responses**
3a	Well, I've got a comment to make, just a clarification. Let me read this, if I might. Now, this is from the Proposed Plan. Now, please note this – I'm quoting on page 6, in the footnote: "Over half of the risk associated with the hazard index at Site 7, Unit 1 is attributed to manganese and arsenic" – Not just manganese, but "and arsenic." Maybe it's a misprint, or something. But that's what I read in here. And, by the way, I disagree. I think – If I may say this, I think Chuck Bennett and I both disagree that we do not concur that they are naturally occurring. I imagine they are naturally occurring. But we think there is a – There has been additional contamination over and above and beyond what is naturally occurring in the soil sampling. Anyway, it says: "which are naturally occurring metals in native soil on and off MCAS El Toro property, and are not associated with past site activities." I think we have to disagree with that, respectfully. I believe we do have some evidence – and I believe you do, too – that they are more – that they are not just – Well, see: We don't know precisely know the disposal effect. I've talked to employees on the base, on the former base. And they told me that they disposed of all kinds of things in these landfills. And I'm talking specifically about Site 7 and all the other sites. There are many chemicals disposed of. And these employees – I can name you names – that – Millard Jackson. He was the – worked in the physical plant. Remember that name. He told me where the – As you probably heard this before, Dean, forgive me. There was – If you remember, they would have the annual IG inspections. They would bury a lot of chemicals and other items. Because if they did – If they had them during the inspection, that means that they wouldn't – Let's say it's half full, a half-full barrel of arsenic, let's say, for instance. Then, they would have to dispose of that, or else they wouldn't get it the next time around. There are annual appropriations.	Background concentrations for metals and reference levels for herbicides and pesticides at MCAS El Toro were evaluated in 1996. The results of this evaluation were presented in a technical memorandum issued in October of that year. The memorandum notes that two sets of data were used to evaluate the background concentrations of metals in soil. The first set of data was collected from 11 soil sample locations in the foothills above MCAS El Toro. The second set of background metal data was compiled from a series of soil borings that were completed upgradient from the Installation Restoration Program (IRP) sites. These locations were selected because they reflect areas that are not contaminated by activities that may have taken place at a particular IRP site. The methodology and results of the background evaluation were reviewed by the BCT. Soil samples collected at Site 7 were compared with background for the full suite of metals addressed in the RI Report. In the case of arsenic cited in this comment, the soil sample data for Site 7 clearly support the conclusion that the concentrations reflect natural background conditions. Approximately 98 percent (121 of 124 samples) contained arsenic at concentrations less than the MCAS El Toro statistically derived background value (95 UCL). The remaining 2 percent (three samples) are slightly above the background. It should be noted that the statistically derived background value was not the highest concentration reported during background sampling. Hence, the background sample data set includes some arsenic concentrations that are also greater than the 95 UCL. Such conditions are indicative of the variation present in nature. At Site 14, also included in this Proposed Plan, 100 percent of the arsenic concentrations in soil were less than the MCAS El Toro background 95 UCL. In the RI Report for each site, the DON has acknowledged that pesticides and herbicides containing arsenic compounds could potentially have been used for agricultural or pest-control purposes prior to construction and expansion of MCAS El Toro, or for weed control and insect or animal abatement in industrial areas on the station. However, as discussed in the previous paragraph, the sample results do not support the presence of arsenic contamination at either site.

Comments Received During Public Meeting Held 25 October 2000		
Comments by:	***Mr. Don Zweifel, MCAS El Toro RAB Member***	
Number	**Comments**	**Responses**
	That's the problem, you see. So what I'm saying tonight, just before maybe a week or two before the actual IG inspection, they would go – every year, they would do this. Millard Jackson was on this base for many years. Now, you know it and I know it. That happened.	The DON, in conjunction with the regulatory agencies, conducted interviews of current and former employees to support the identification of sites and historical practices that may have contributed to soil and/or groundwater contamination at MCAS El Toro. None of the information obtained during these interviews indicated or implied that packaged or drummed "chemicals and other items" might have been buried at Site 7 or 14.
3b	In regards to the arsenic that was utilized on citrus orchards and fields – Well, see: We have to have farmers. And as you know, this base wasn't built till 1943. Now, maybe, perhaps – I don't know how long we've had – Now, here's a good question: How long have we had tenant farmers on the base; since 1943, when the base was built? And how long has arsenic, how long was arsenic utilized for agricultural uses? Now, the thing is, here's a great way for SWDIV to get off the hook. And it may be Irvine Company in particular; maybe they're culpable. I've said this for years, you know, that – Dean, and others in this room – The Irvine Company could be liable on this, could be guilty. And also, your tenant farmers, if they've used arsenic agriculturally, then, by God, this could be a contributing factor. Then, SWDIV is not culpable, unless you did not monitor your tenant farmers in their insecticides, fungicides, herbicides that they put down. Maybe the Department of Navy is culpable. You know – I mean, you have to consider somebody's got to be culpable. Thank you.	As the discussion in the second and third paragraphs of the previous response indicate, the sample results for Sites 7 and 14 indicate that arsenic concentrations in soil are comparable to or less than the MCAS El Toro background. As discussed in the response to Comment 3a, the areas where the background samples were taken were on- and off-station in areas that were not impacted by site activities. Since the concentrations at Sites 7 and 14 are comparable to background, the soil data do not suggest that elevated arsenic is present at either Site 7 or 14 as a result of past site operations or activities.

Comments Received During Public Meeting Held 25 October 2000		
Comments by:	*Mr. Don Zweifel, MCAS El Toro RAB Member*	
Number	**Comments**	**Responses**
3c	Chuck Bennett just pointed out to me, a minute ago, that in regards to Site 7 – evidently Unit 4, the drainage ditch; the Unit 1, the north pavement; Unit 3, the old – new east pavement edge; Unit 4 – Unit 5, the open dirt area – and, in particular, the Unit 4, drainage ditch – all dumped into the Agua Chinon Wash. Now, the thing is, I believe – It is my opinion that there are contaminants in that wash. Now, the thing is, of course, there have been many rains since. And the chances are – What I'm referring to is the Upper Newport Bay. All of this contamination will ultimately end up in Upper Newport Bay. Ultimately, it's a fact. I say that the Navy has an obligation to examine – In fact, I think I told you, Dean, earlier, that I have a hydrographic survey of Upper Newport Bay provided to me by the county that I would like to know if you have. And if you do – If you have that survey, I won't – But do you have it? Would you like to see it? What I'm referring to – What I'd like to do is have the Department of the Navy do some samplings of the soils, of the sludge in Upper Newport Bay. And, hopefully, it's still there. Of course, there's been a lot of tidal action – my, God – over the years. What I'm saying is ultimately, the point-source contamination eventually will end up in Upper Newport Bay, from the Marine Corps Station El Toro, from Site 7 and other sites. The Borrego Canyon one, I know. What I'm saying is I believe – and maybe I'm a lone voice here. But I think that the Upper Newport Bay needs to be sampled. Because ultimately – You know what I'm referring to, the City of Irvine.	Site 7, Unit 4 (Drainage Ditch) was identified specifically to assess potential surface runoff from other areas of Site 7 toward Agua Chinon Wash. However, the RI data indicate that only low levels of contaminants were identified in soil at Unit 4. As discussed in the response to Comment 1d, these results support the conclusion that contaminants in soil at adjacent Site 7 units are not mobile and that Site 7, Unit 4 is not a conduit for movement of contaminants into Agua Chinon Wash. There are four major drainage channels that flow through or are adjacent to the station. These channels are Agua Chinon Wash, Bee Canyon Wash, Borrego Canyon Wash, and Marshburn Channel. These drainage channels pass through MCAS El Toro, where they collect surface drainage from the hills and runoff generated from extensive paved surfaces on the station. The channels drain to San Diego Creek, which ultimately discharges to Upper Newport Bay. The drainage channels were once thought to be a potential source of regional VOC groundwater contamination in the Irvine Groundwater Subbasin and were, therefore, investigated as part of the Phase I and Phase II remedial investigations. These investigations concluded that the channels (designated Site 25) were not a source of contamination, and no action was recommended for the channels. Site 25 was included in the no further action Proposed Plan for 11 sites that was reviewed by the public in 1997. The no further action ROD was signed in September 1997. Because no significant contamination was found in the four drainage channels, the DON does not consider it necessary or appropriate to conduct further sampling off station.
3d	You held us up on the Q-and-A part. During the dog-and-pony show, you couldn't do Q and A. You know you said that. Ladies and gentlemen, you know how I feel about this. Triss, you know how I feel, perhaps. What I'm referring to specifically, if we can ask questions during the presentation, then it jogs our memory. We can make notes. Then, if we	The public was asked to withhold questions about Sites 7 and 14 until after the Navy's presentation in order to assure that all questions could be recorded by the court reporter present at the meeting, compiled into a responsiveness summary, and responded to formally in the ROD. The public is welcome to make notes during the presentations and use these notes as the basis of questions in order to ensure that all comments and concerns are addressed in the most efficient manner possible.

Comments Received During Public Meeting Held 25 October 2000		
Comments by:	*Mr. Don Zweifel, MCAS El Toro RAB Member*	
Number	**Comments**	**Responses**
	hold the questions until after the dog-and-pony show is over, then I forget to ask. I do apologize to the reporter. I probably forgot some of the questions I was going to ask and, thereby, make a statement in those questions.	
3e	Having to do with my – she said – quote – migration is very limited. And in regards to Site 14, I believe – Didn't you say the battery acid? And I would be very concerned. I would like to see – I would like to see more proof that that might – that there hasn't been some vertical or horizontal migration in regards to that. Now, Content is saying there's very limited. But what does "very limited" mean? You didn't say. So maybe Content could clarify. What does "very limited" mean; 100 feet, 1,000 feet, 10,000 feet, 30,000 feet? I mean, the question is what is "very limited." And so, that really doesn't – If you'll forgive me, Content, I'd sure like to have a clarification.	"Very limited" refers to the fact that contamination at Site 14 is limited to shallow soil (i.e., soil that extends from the surface to a depth of 10 feet). The RI Report concluded that contamination was essentially limited to the upper 2 feet of that 10-foot shallow-soil interval. With regard to horizontal migration, a finding of "very limited" extent for soil contamination was based on a series of physical and chemical factors, including review of historical documents and aerial photographs, discussions with station personnel regarding the types of activities conducted at Site 14, the physical characteristics of the site, the chemical characteristics of the shallow soil, and the analytical results for the soil samples collected during the RI. Historical information indicates that waste disposal activities at this site were limited to the area immediately adjacent to the edge of the asphalt pavement along the southwest side of Building 245. The topography of the site also imposes some physical constraints on the site because the drainage ditch is the low point for the area adjacent to the pavement edge. Wastes disposed at the edge of the pavement could potentially move southward to the bottom of the drainage ditch but then only laterally along the ditch toward the catch basin. As shown on Figures 4-3 and 4-4 in Attachment P of the Site 7/14 RI Report, only trace to low concentrations of contaminants are present in soil along the pavement edge and the drainage ditch. In addition, as the figures illustrate, samples collected very close to each other did not show similar concentrations of analytes. That is, for example, some samples contained low concentrations of PAHs while adjacent samples or samples taken at a slightly greater depth contained no PAHs above detection limits. This indicates that any contamination that is present is limited in extent.

Comments Received During Public Meeting Held 25 October 2000		
Comments by:	*Mr. Don Zweifel, MCAS El Toro RAB Member*	
Number	**Comments**	**Responses**
		On the specific issue of battery acid, the soil at Site 14 is moderately alkaline and calcareous. These conditions in the near-surface soil horizons would effectively neutralize the battery acid disposed at this site between 1977 and 1983. The natural ability of the soil to effectively neutralize acid wastes disposed at the site is also evidenced in the condition of vegetation observed during numerous visual inspections. The grass that covers the site does not exhibit any evidence of stress that would result were acidic soil conditions present.
3f	Content said one thing, by the way. I have a quote from her in regards to factors considered when making the risk management decision. And maybe this goes to Dr. Temeshy, also, regarding planned future uses – quote – potential – The potential residential risk scenarios will be implemented. And I think that – In other words, if – I guess, the question is if we're going to have – if the risk assessment is going to be all over the base or, in particular, these particular sites will be for the dirt-eating kid. Is that what you're referring to? Is that what you're attesting to? Is that correct?	The risk assessments for Sites 7 and 14 were performed using a residential scenario. This scenario assumed that a resident is present at the site from age 0 to age 30 (6 years as a child and 24 years as an adult). The resident is exposed to contaminants in soil through ingestion, dermal contact, and inhalation. In the case of a child, it is assumed that the child consumes 200 milligrams of dirt per day for 6 years (age 0 to age 6.) This same assumption would be made at all MCAS El Toro sites that were evaluated under a residential risk assessment scenario.
3g	I had one here regarding Site 7, Unit 4, two additional cases of one million under cancer risk residential scenario. It looks like – There's a statement here: "The only risk driver present is one PAH, benzo(a)pyrene. Benzo(a)pyrene is present in low concentrations and is not mobile." I don't – I don't know how you can come to the conclusion that it's not mobile. I mean, it's assumed to nonmobile. It is stationary. It cannot – Is precipitation going to cause mobility, downgrading? Is it going to cause a horizontal? Is it going to hydraulic horizontally? These are important questions.	PAHs are discussed in the fate and transport portion of the RI Report for Sites 7 and 14 as follows. PAHs are the predominant class of SVOCs reported at Site 7, perhaps because they are most persistent in the environment. As a chemical group, PAHs have low water solubility and a high affinity for sorption to organic matter (high K_{oc} [organic carbon-to-water partitioning coefficient]), characteristics that limit the potential for leaching through soil as a transport process and cause the chemicals to be relatively immobile. Because PAHs do not tend to dissolve in water and do tend to sorb to soil, they do not tend to migrate downward in soil as a result of leaching during infiltration of precipitation or horizontally across the site in surface runoff.

Comments Received During Public Meeting Held 25 October 2000		
Comments by:	*Ms. Marcia Rudolph, MCAS El Toro RAB Member*	
Number	**Comments**	**Responses**
4a	Okay. Marsha Rudolph. Couple things: No. 1, the two hazard index – cancer risk and noncancer risk, and hypothetical residential use, and all, that it would be nice if the two tables would compute together. I'm trying to find a relationship. I'm not. Maybe I'm looking at the wrong thing. No. 2, I note that in the notes to index, noncancer risk for Site 14 – or, basically, for both of them, I guess, it states that manganese and arsenic are attributed to being naturally occurring metals in soil on and off base. Where was the assessment done off base? I thought the Navy didn't do any assessments off base. And the third point: On your on-site exposure risk table, it says that the contaminants in the soil did not extend to groundwater. Is that specific to this site, or is that a general observation? If it's a general observation – Excuse me? I think – Whatever.	With regard to the first comment, the cancer and noncancer risks are discussed separately and shown in separate tables because these risks are not directly related. Human-health risk assessments are performed for two types of risks: risks associated with acquiring cancer and risks associated with other types of health effects such as liver damage. A chemical that is known to cause noncancer effects (noncarinogen) may not cause cancer in a human. Examples associated with Sites 7 and 14 include some metals, such as mercury; VOCs, such as 1,1,1-trichloro-ethane; SVOCs/PAHs, such as fluoranthene; and pesticides, such as endosulfan sulfate. These chemicals are not known to cause cancer, but they can produce noncancer effects in humans. Alternatively, the PAH compound benzo(a)pyrene can simultaneously cause cancer and noncancer effects in humans. Therefore, both cancer and noncancer risks are calculated separately for benzo(a)pyrene. With regard to the second comment, manganese and arsenic are common components of the minerals, soil, and rocks that constitute the earth. As such, they are typically identified when soil samples are analyzed for metals. They are considered naturally occurring at Sites 7 and 14 because the concentrations that were present in soil at both sites were comparable to the concentrations of these metals present throughout the station (i.e., the concentrations were at background) and because there are no known site-related activities that would cause the concentrations of these chemicals to be elevated above natural background levels. As discussed in the response to Comment 3a (from Mr. Don Zweifel), background samples were collected from soil sample locations in the foothills north and east of MCAS El Toro and from sample locations upgradient of the IRP sites. It is not typically DoD's policy to sample off-base, but such a decision is made occasionally on a site-by-site basis. In this case, the DON elected to collect background samples off-station in undeveloped areas in the foothills because these areas had not been impacted by either on- or off-station operations. Finally, the statement that contaminants in the soil do not extend to groundwater is specific to Sites 7 and 14 and is based on the results of site-specific sampling, which showed that contamination present at these sites does not extend below 10 feet below the ground surface.

Comments Received During Public Meeting Held 25 October 2000		
Comments by:	*Ms. Marcia Rudolph, MCAS El Toro RAB Member*	
Number	**Comments**	**Responses**
4b	One more. Then – When I'm looking at the overmap that was given, sort of risk management. I'm looking at Site 7. And it states – Since I didn't have the document, and I just – it's not an intelligent question. It mentions a drainage ditch. Is this drainage ditch one that would be connected to one of the washes that was Site 25, no further action? Or is there a relationship between those? I mean, I see drainage, I think – Then, we think of solvent studies. But I won't even go there. But I'm concerned about drainage ditch. And is this close to Agua Chinon? I mean, it seems consistent that you can have no further action in drainage ditch and no further action here. Is that where this is, or am I seeing it in the wrong place?	As noted previously in the response to Comment 3c (from Mr. Don Zweifel), Unit 4 at Site 7 is a drainage ditch that could potentially receive surface runoff from other areas of Site 7 and potentially convey such runoff to Agua Chinon Wash. Agua Chinon Wash is approximately 1,100 feet south of Site 7, Unit 4. The RI data indicated that only low levels of contaminants were identified in soil at Unit 4. In addition, as shown in Figures 4-3 and 4-4 of Attachment O of the Site 7/14 RI Report, samples collected very close to each other at Unit 4 did not show similar concentrations of analytes. That is, for example, some samples contained low concentrations of PAHs while adjacent samples contained no PAHs above detection limits. These results supported the RI conclusion that contaminants in soil at Site 7 were not mobile and that Unit 4 was not a conduit for movement of contaminants into Agua Chinon Wash. The no further action recommendation for Site 7 (including Unit 4) was based on the low contaminant concentrations present, their limited horizontal and vertical extent, and their lack of mobility. Also, as noted in this comment, the finding of no action for Site 7 is consistent with the no action ROD signed in September 1997 for 11 sites that included Site 25 (Agua Chinon Wash, Bee Canyon Wash, Borrego Canyon Wash, and Marshburn Channel).
4c	It was unclear – Perhaps, this is something you will actually answer – what will happen to these questions. Are we going to get some kind of a document that will tell us the answers, or are you just going to have the court reporter list all the questions? I think a lot of us, because we live in California, are used to the CEQA process, where those answers are put someplace and they're required to be there. Will we see these answers before the document is RODed?	The questions that were raised at the public meeting were recorded by a court reporter. These questions were then copied from the transcript into this Responsiveness Summary format. This Responsiveness Summary is the means by which the Navy is providing responses to each question presented. The Responsiveness Summary will be submitted to the BCT and the Restoration Advisory Board (RAB) for review under separate cover from the draft ROD for Sites 7 and 14. Once the responses have been reviewed, comments will be incorporated as appropriate, and the Responsiveness Summary will be made part of the draft final ROD. The ROD will be placed in the Administrative Record for MCAS El Toro. This record is available at the station. A duplicate file is also maintained at Southwest Division Naval Facilities Engineering Command in San Diego.

Comments Received During Public Meeting Held 25 October 2000		
Comments by:	*Ms. Marcia Rudolph, MCAS El Toro RAB Member*	
Number	**Comments**	**Responses**
		Since the individuals who made comments at the public meeting are members of the RAB, they will have the opportunity to review the responses at the draft stage before the ROD is finalized. In addition, once the Responsiveness Summary has been reviewed by the BCT and the RAB and their comments have been incorporated, a copy will be mailed to all individuals who submitted comments.

Comments Received During Public Meeting Held 25 October 2000		
Comments by:	*Mr. Michael Brown, Consultant to City of Irvine*	
Number	**Comments**	**Responses**
5a	Couple questions: One, what about, in particular, the arsenic issue? And where is the comparison with the off-site concentrations of arsenic? Are those, in particular, agricultural sites? Arsenic was used very commonly prior to World War II as a pesticide, particularly in this area, particularly in citrus use – orchards. Also, given that you do have risks greater than one in a million, does that trigger a Prop 65 warning? And would that require the Navy to extend a warning to – upon transfer, under Prop 65?	Please see the response to Comment 3a (from Mr. Don Zweifel) for a discussion of how the background concentrations for metals were developed and where the on- and off-station samples used for this evaluation were collected. The final Technical Memorandum, Background and Reference Levels, Remedial Investigations, Marine Corps Air Station El Toro, California (BNI 1996) includes a map illustrating the locations of all soil samples used for the metals background analysis. As the cited comment indicates, off-station samples were collected in foothill areas north and northeast of MCAS El Toro. One on-station sample and a duplicate were collected upgradient of Site 5 adjacent to the agricultural area on the east side of Perimeter Road. The reported arsenic concentrations for these samples were 1.5 and 1.9 mg/kg, well below the calculated MCAS El Toro background for arsenic of 6.86 mg/kg. In the RI Report for each site, the DON has acknowledged that pesticides and herbicides containing arsenic compounds could potentially have been used for agricultural or pest-control purposes prior to construction and expansion of MCAS El Toro or for weed control and insect or animal abatement in industrial areas on the station. However, as discussed in the response to Comment 3a, the sample results do not support the presence of arsenic contamination at either Site 7 or 14. The DON has performed a thorough evaluation of the Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65) and the regulations implementing it (*California Code of Regulations* [CCR], Title 22, Section [§] 12000 et seq.) and has determined that the statute is not directly applicable to the federal government. The definition of covered "person" in California Health and Safety Code § 25249.11(a) does not include governmental entities, including the federal government. See also the definition of "person in the course of doing business" at California Health and Safety Code § 25249.11(b).

Comments Received During Public Meeting Held 25 October 2000		
Comments by:	*Mr. Michael Brown, Consultant to City of Irvine*	
Number	**Comments**	**Responses**
		On the issue of whether a risk greater than one in a million triggers a Proposition 65 warning, CCR Title 22, § 12703(b) states: "For chemicals assessed in accordance with this section, the risk level which represents no significant risk shall be one which is calculated to result in one excess case of cancer in an exposed population of 100,000, assuming lifetime exposure at the level in question . . . ." Although the DON will not be issuing a Proposition 65 warning upon property transfer, the deed will contain a hazardous substances notification, identifying hazardous substances that were stored for 1 year or more, known to have been released or disposed on the property.
5b	One more, just the issue of lead at Site 14. And there's one significant hit along – a little over 900 milligrams – or kilograms, and whether or not that is a significant level – It's Table 4.2 for Site 14. Appendix B. And in the context of lead – Lead, in particular, is over background in just about every sample taken. So even whether or not above the action level, it appears that there's certainly extensive lead contamination at that site. And again, we were very curious, listening to the presentation, that it was not considered to be a risk driver, and particularly in the hazard index. Again, lead, being a reproductive toxin, under normal circumstances, would trigger a Prop 65 warning. So I'm not clear why this isn't a significant issue on your risk assessment.	As the comment correctly notes, the reported concentrations of lead in surface soil samples (0 foot) and some samples collected at a depth of 2 feet at Site 14 exceeded the MCAS El Toro background concentration for lead. This was recognized in the RI Report and is addressed in the risk assessment for Site 14 (Section 6 in Attachment P of the RI Report). The risk for lead is assessed differently from the cancer and noncancer risks developed for other chemicals. While risks for other chemicals are based on whether they potentially cause cancer or other types of health effects (e.g., liver damage), lead is evaluated in relationship to the concentration measured in blood. The evaluation process is as follows. Like all chemicals evaluated in the risk assessment, an EPC for lead was calculated. U.S. EPA specifies using the 95 percent UCL of the average measured chemical concentrations. In lieu of the 95 percent UCL, the maximum reported concentration is used as the EPC if 1) the 95 percent UCL exceeds the highest reported lead concentration or 2) there are fewer than four reported concentrations (those greater than the detection limit). For the residential scenario (resident child and adult), shallow-soil concentrations were used to derive an EPC. For the industrial scenario (industrial workers), surface-soil concentrations were used to derive an EPC. However, for both scenarios, the maximum reported concentration of 923 mg/kg was ultimately used as the EPC because of the exceptions identified above.

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Comments by:	*Mr. Michael Brown, Consultant to City of Irvine*	
Number	**Comments**	**Responses**
		The surface- and shallow-soil EPCs for lead are then compared to established preliminary remediation goals (PRGs). For residential land use (shallow soil), the concentration of lead was compared with the residential Cal-EPA PRG of 130 mg/kg rather than the U.S. EPA PRG of 400 mg/kg because the California PRG was lower and more stringent. For industrial land use (surface soil), the EPC was compared with the corresponding industrial U.S. EPA PRG of 1,000 mg/kg. If the EPC exceeds the PRG for any scenario, the California pharmacokinetic model is utilized to estimate the lead concentration in blood. For Site 14 data, only the residential scenario EPC exceeded the applicable PRG. For this scenario, the California pharmacokinetic model was utilized to estimate the lead concentration in blood for a resident child and adult. The estimated levels of lead in the blood of a resident adult did not exceed the benchmark of 10 µg/dL established by U.S. EPA. For a resident child, this threshold was exceeded at the 90th, 95th, 98th, and 99th percentiles, indicating a potential for adverse health effects from exposure. However, these results were based on use of the maximum reported concentration, which was more than twice as high as the next highest reported concentration. Assuming long-term contact with the maximum concentration is a very conservative approach that results in overestimates of exposure and risk. As noted in the response to the previous comment, the DON has determined that Proposition 65 requirements are not applicable to this site.

Reference:
Bechtel National, Inc. 1996. Final Technical Memorandum, Background and Reference Levels, Remedial Investigations, Marine Corps Air Station El Toro, California

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RESPONSE TO COMMENTS SUBMITTED TO COURT REPORTER DURING PUBLIC MEETING

RESPONSIVENESS SUMMARY
MARINE CORPS AIR STATION – EL TORO, CALIFORNIA
PROPOSED PLAN, OPERABLE UNIT 3B, NO FURTHER ACTION SITES 7 AND 14

Comments Submitted to Court Reporter During Public Meeting Held 25 October 2000

Comments by: ***Ms. Marcia Rudolph, MCAS El Toro RAB Member***

Number	Comments	Responses
1	The Navy has categorically refused to do off-site background testing of radionuclides. Yet, in the summary on Sites 7 and 14, as I've seen tonight, the comment was made relative to arsenic and manganese, that these are natural based upon off-site numbers. The genesis of those numbers is not given. I believe it is incumbent upon the Navy to provide the source for their opinion that the arsenic and manganese, as seen in the numbers that they generated for Site 7 and 14, are indeed consistent with those numbers off-site, especially giving a map showing location of those off-site sources that they are using for their reference points. I continue to be suspicious of the location of Site 7 in relation to the Agua Chinon Wash, and the fact that the Navy has – had decided in 1997, on a no further action for that site, along with the other two washes that come off the base. I continue to believe that a reexamination of Site 25 at the washes is prudent in light of TMDL and the issues of contamination runoff from MCAS El Toro. (This concludes the comments submitted to reporter.)	Background concentrations for metals and reference levels for herbicides and pesticides at MCAS El Toro were evaluated in October 1996. The results of this evaluation were presented in a Technical Memorandum issued in October of that year. A copy of the Technical Memorandum can be found in the Administrative Record for MCAS El Toro (Record No. 001710). The memorandum notes that two sets of data were used to evaluate metal backgrounds in soil. The first set of data was collected from 11 soil sample locations in the foothills above MCAS El Toro. The second set of background metal data was compiled from a series of soil borings that were completed upgradient of the Installation Restoration Program (IRP) sites. These locations were selected because they reflect areas that are not contaminated by activities that may have taken place at a particular IRP site. A figure depicting the locations of the background samples was presented on page 1-11 of the Technical Memorandum. As noted in the response to Comment 3c, Site 7, Unit 4 (Drainage Ditch) was identified specifically to assess potential surface runoff from other areas of Site 7 toward Agua Chinon Wash. However, the RI data indicate that only low levels of contaminants were identified in soil at Unit 4. These results support the conclusion that contaminants in soil at adjacent Site 7 units are not mobile and that Site 7 Unit 4 is not a conduit for movement of contaminants into Agua Chinon Wash. Further, as noted in the response to Comment 3c, there are four major drainage channels that flow through or are adjacent to the station. These channels are Agua Chinon Wash, Bee Canyon Wash, Borrego Canyon Wash, and Marshburn Channel. These drainage channels pass through MCAS El Toro, where they collect surface drainage from the hills and runoff generated from extensive paved surfaces on the station. The drainage channels were once thought to be a source of regional volatile organic compound groundwater contamination in the Irvine Groundwater Subbasin and were, therefore, investigated as part of the Phase I and Phase II remedial investigations. These investigations,

Comments Submitted to Court Reporter During Public Meeting Held 25 October 2000		
Comments by:	*Ms. Marcia Rudolph, MCAS El Toro RAB Member*	
Number	**Comments**	**Responses**
		conducted using work plans approved by the Base Realignment and Closure Cleanup Team, concluded that the channels were not a source of contamination. As a result, the drainage channels (designated as Site 25) were included in a no-action record of decision that was signed in September 1997. Please see the responses to Comments 3c and 4b in this Responsiveness Summary for discussion of Site 7 in relation to Agua Chinon Wash. With regard to the issue of reexamining Site 25, the DON has no plans to conduct further evaluations of the four washes. This decision is supported by the regulatory agencies. At the 27 September 2000 Restoration Advisory Board (RAB) meeting in response to a question from Dr. Bennett, Mr. John Broderick (MCAS El Toro, California Regional Water Quality Control Board [RWQCB] Remedial Project Manager) indicated he was personally involved early in the Comprehensive Environmental Response, Compensation, and Liability Act investigation at MCAS El Toro. At that time, the RWQCB believed that Agua Chinon Wash would be very contaminated, based on discharges from work areas at MCAS El Toro in the area including and adjacent to Site 7 (i.e., the area of the two large hangars). Because RWQCB expected to find contamination, they "worked over the DON's shoulders," reviewing and approving the work plan for the investigation and reviewing the investigation results. However, in contrast to the RWQCB expectations, significant contamination was not identified in the washes. Therefore, the RWQCB agrees with the recommendation for no further action because the investigation was done under agency oversight. MCAS El Toro currently has a National Pollution Discharge Elimination System (NPDES) permit for stormwater contributions to surface water flow in the four washes. The analytical data collected in conjunction with this NPDES permit are reviewed by RWQCB. RWQCB has not expressed concern about total maximum daily load in the washes at MCAS El Toro. If they do so in the future, the DON would be pleased to meet with RWQCB to address any concerns.

ATTACHMENT A

ADMINISTRATIVE RECORD FOR NO ACTION SITES

PUBLIC PARTICIPATION DOCUMENTS

DRAFT ADMINISTRATIVE RECORD FILE INDEX - UPDATE (SORTED BY RECORD DATE/RECORD NUMBER)
MCAS El Toro
PUBLIC PARTICIPATION FOR SITES 7/14 (OU 3 & OU 3B)

UIC No. / Rec. No. Doc. Control No. Record Type Contr./Guid. No. Approx. # Pages	Prc. Date Record Date CTO No. EPA Cat. #	Author Affil. Author Recipient Affil. Recipient	Subject	Classification	Keywords	Sites	Location Box No.
M60050 / 001011 MEMO NONE 0001	12-08-1995 04-27-1990 NONE 10 3	SOUTHWEST DIVISI L. NUZUM TRC MEMBERS	APRIL 26, 1990 TRC MEETING MINUTES	ADMIN RECORD	MTG MINS PUB. PARTICIPAT TRC	00002 00003 00005 00010 OU 2 OU 2B OU 3	PIERCE LEAHY 80462348
M60050 / 000892 MISC NONE 0006	07-19-1995 11-01-1991 NONE 10.6	SOUTHWEST DIVISI	FACT SHEET "DESCRIBING INVESTIGATION OF POSSIBLE HAZARDOUS WASTE CONTAMINATION"	ADMIN RECORD	HAZ WASTE PUB. PARTICIPAT	00001 00002 00003 00004 00005 00006 00007 00008 00009 00010 00011 00012 00013 00014 00015 00016 00017 00018 00019 00020 00021 00022	SOUTHWEST DIVISION NONE

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UIC No. / Rec. No. Doc. Control No. Record Type Contr./Guid. No. Approx. # Pages	Prc. Date Record Date CTO No. EPA Cat. #	Author Affil. Author Recipient Affil. Recipient	Subject	Classification	Keywords	Sites	Location Box No.
M60050 / 001834 MISC NONE 0011	03-24-1997 11-18-1991 NONE 10.4	MCAS EL TORO	PUBLIC FORUM AGENDA WITH HANDOUTS	ADMIN RECORD	CERCLA OU PUB. PARTICIPAT RI	00001 00002 00003 00004 00005 00006 00007 00008 00009 00010 00011 00012 00013 00014 00015 00016 00017 00018 00019 00020 00021 00022 OU 1 OU 2 OU 4	SOUTHWEST DIVISION NONE

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UIC No. / Rec. No. Doc. Control No. Record Type Contr./Guid. No. Approx. # Pages	Prc. Date Record Date CTO No. EPA Cat. #	Author Affil. Author Recipient Affil. Recipient	Subject	Classification	Keywords	Sites	Location Box No.
M60050 / 001028 MM N6871189D929600 0026	12-08-1995 12-17-1992 00145 01 6	JACOBS ENGINEERING SOUTHWEST DIVISION	DECEMBER 17, 1992 TRC MEETING MINUTES	ADMIN RECORD	MTG MINS PUB PARTICIPAT TRC	00001 00002 00003 00004 00005 00006 00007 00008 00009 00010 00011 00012 00013 00014 00015 00016 00017 00018 00019 00020 00021 00022 00024 00025 OU 1 OU 2 OU 2A OU 2B OU 2C OU 3	PIERCE LEAHY 80462348
M60050 / 000125 LTR NONE 0000	11-01-1993 02-26-1993 NONE 08 1	DTSC G HOLMES SOUTHWEST DIVISION A PISZKIN	DRAFT POSITION PAPER ON THE PRELIMINARY RISK ASSESS FOR OPERABLE UNITS (OUS)-1, 2 AND 3 AND THE PROPOSED EL TORO BASELINE HUMAN HEALTH RISK ASSESS FOR OU-1	ADMIN RECORD	NFA OU RISK TECH/GUID DOC	OU 1 OU 2 OU 3	SOUTHWEST DIVISION NONE

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UIC No. / Rec. Doc. Control No. Record Type Contr./Guid. No. Approx. # Pages	Prc. Date Record Date CTO No. EPA Cat. #	Author Affil. Author Recipient Affil. Recipient	Subject	Classification	Keywords	Sites	Location Box No.
M60050 / 000142 LTR NONE 0000	11-01-1993 07-26-1993 NONE 01.1	J. PAWLISCH SOUTHWESTDIV J. HAMILL EPA	SCHEDULE EXTENSION REQUEST FOR THE MCAS EL TORO DRAFT PHASE II WORK PLAN FOR OPERABLE UNITS (OUS) 2 AND 3	ADMIN RECORD	OU	OU 2 OU 3	SOUTHWEST DIVISION NONE
M60050 / 000116 LTR NONE 0000	11-01-1993 08-04-1993 NONE 01.6	EPA J. HAMILL SOUTHWEST DIVISION A. PISZKIN	SCHEDULE EXTENSION REQUEST DRAFT PHASE II WORK PLAN FOR OPERABLE UNITS 2 AND 3	ADMIN RECORD	FFA TECH/GUID DOC.	OU 2 OU 3	SOUTHWEST DIVISION NONE
M60050 / 000890 MISC NONE 0008	07-19-1995 12-01-1993 NONE 10.6	SOUTHWEST DIVISI	FACT SHEET "UPDATE OF THE ENVIRONMENTAL INVESTIGATIONS AT MCAS EL TORO"	ADMIN RECORD	PUB PARTICIPAT PUBNOT	00001 00002 00003 00004 00005 00006 00007 00008 00009 00010 00011 00012 00013 00014 00015 00016 00017 00019 00020 00021 00022	SOUTHWEST DIVISION NONE

UIC No. / Rec. ...							
Doc. Control No.	Prc. Date	Author Affil.					
Record Type	Record Date	Author					
Contr./Guid. No.	CTO No.	Recipient Affil.					Location
Approx. # Pages	EPA Cat. #	Recipient	Subject	Classification	Keywords	Sites	Box No.
M60050 / 001545	07-10-1996	SOUTHWEST	LETTER WRITTEN FROM THE NAVY TO	ADMIN RECORD	FFA	00001	PIERCE LEAHY
	12-29-1994	DIVISI	DTSC REQUESTING AN EXTENSION TO		OU	00002	80462365
LTR	00080	J. PAWLISCH	FFA SCHEDULE FOR OPERABLE UNIT (OU)			00003	
NONE	01.1	DTSC REGION IV	2 AND 3 DATED 12/29/94			00004	
0004		J. SCANDURA				00005	
						00006	
						00007	
						00008	
						00009	
						00010	
						00011	
						00012	
						00013	
						00014	
						00015	
						00016	
						00017	
						00019	
						00020	
						00021	
						00022	
						00024	
						00025	
						OU 2	
						OU 3	
M60050 / 000934	08-07-1995	MCAS EL TORO	APRIL 27, 1995 RAB MEETING MINUTES	ADMIN RECORD	MTG MINS	00004	PIERCE LEAHY
	04-11-1995	J. JOYCE	AND REVISED MEETING MINUTES FROM		RAB	00007	80462347
LTR	NONE	RAB MEMBERS	MARCH 30,1995 RAB MEETING		TECH/GUID DOC.	00011	
NONE	10.4					00013	
0026						00014	
						00019	
						00020	
						OU 1	

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M60050 / 001570 MEMO NONE 0004	07-11-1996 **06-19-1995** NONE 02.4	DTSC J. CHRISTOPHER DTSC REGION IV J. JIMENEZ	DRAFT MEMORANDUM TRANSMITTING COMMENTS ON ENGINEERING EVALUATION/COST ANALYSIS (EE/CA) COMPLETEDFOR OPERABLE UNIT (OU) 3 SITES	ADMIN RECORD	COMMENTS EE/CA	00004 00007 00011 00013 00014 00019 00020 OU 3	PIERCE LEAHY 80462365
M60050 / 000985 MISC NONE 0008	10-04-1995 **07-01-1995** NONE 10.4	JACOBS ENGINEERING COMMUNITY MEMBER	FACT SHEET NO. 3 (WITH MAILING LIST)	ADMIN RECORD INFO REPOSITORY	EE/CA PUB. PARTICIPAT PUBNOT	00004 00007 00011 00013 00014 00019 00020	SOUTHWEST DIVISION NONE
M60050 / 001311 LTR NONE 0002	03-14-1996 **07-07-1995** 00059 02.7	AMERICAN ENVIROT E. COHN GARY MCAS EL TORO J. JOYCE	RAB MEMBER REVIEW COMMENTS ON DRAFT EE/CA DOCUMENTS FOR SITES 7, 11, 13, 14, 19, AND 20	ADMIN RECORD	COMMENTS EE/CA RAB	00004 00007 00011 00013 00014 00019 00020	PIERCE LEAHY 80462353
M60050 / 000966 MM NONE 0016	08-29-1995 **07-27-1995** NONE 10.4	RAB MEMBERS	JULY 27, 1995 RAB MEETING MINUTES	ADMIN RECORD INFO REPOSITORY	MTG MINS PUB. PARTICIPAT	00002 00003 00005 00017 00024 00025 OU 2 OU 3	PIERCE LEAHY 80462347

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UIC No. / Rec. No. Doc. Control No. Record Type Contr./Guid. No. Approx. # Pages	Prc. Date Record Date CTO No. EPA Cat. #	Author Affil. Author Recipient Affil. Recipient	Subject	Classification	Keywords	Sites	Location Box No.
M60050 / 000970 MM NONE 0019	08-29-1995 07-27-1995 NONE 10.4	MCAS EL TORO	JULY 27, 1995 RAB MEETING MINUTES	ADMIN RECORD INFO REPOSITORY	MTG MINS PUB. PARTICIPAT	00002 00003 00005 00017 00024 00025 OU 2 OU 3	PIERCE LEAHY 80462347

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UIC No. / Rec. No. Doc. Control No. Record Type Contr./Guid. No. Approx. # Pages	Prc. Date Record Date CTO No. EPA Cat. #	Author Affil. Author Recipient Affil. Recipient	Subject	Classification	Keywords	Sites	Location Box No.
M60050 / 001067	12-11-1995	MCAS EL TORO	JULY 27, 1995 RAB MEETING MINUTES	ADMIN RECORD	MTG MINS	00001	PIERCE LEAHY
	07-27-1995			INFO	PUB. PARTICIPAT	00002	80462364
MM	NONE	RAB MEMBERS		REPOSITORY	RAB	00003	
NONE	10.4					00004	
0007						00005	
						00006	
						00007	
						00008	
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						00022	
						00024	
						00025	
						OU 1	
						OU 2	
						OU 2A	
						OU 2B	
						OU 2C	
						OU 3	

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UIC No. / Rec. No. Doc. Control No. Record Type Contr./Guid. No. Approx. # Pages	Prc. Date Record Date CTO No. EPA Cat. #	Author Affil. Author Recipient Affil. Recipient	Subject	Classification	Keywords	Sites	Location Box No.
M60050 / 000984 MISC NONE 0008	10-04-1995 08-31-1995 NONE 10.4	JACOBS ENGINEERING COMMUNITY MEMBER	AUGUST 31, 1995 RAB MEETING MINUTES	ADMIN RECORD INFO REPOSITORY	EE/CA MTG MINS PUB. PARTICIPAT	00004 00007 00011 00013 00014 00019 00020	SOUTHWEST DIVISION NONE

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UIC No. / Rec. No. Doc. Control No. Record Type Contr./Guid. No. Approx. # Pages	Prc. Date Record Date CTO No. EPA Cat. #	Author Affil. Author Recipient Affil. Recipient	Subject	Classification	Keywords	Sites	Location Box No.
M60050 / 001068	*12-11-1995*	MCAS EL TORO	AUGUEST 31, 1995 RAB MEETING MINUTES (PARTIALLY PRIVILEGED AND CONFIDENTIAL)	ADMIN RECORD	MTG MINS	00001	PIERCE LEAHY
	08-31-1995			CONFIDENTIAL	PUB PARTICIPAT	00002	80462364
MM	NONE	RAB MEMBERS		DOC	RAB	00003	
NONE	10 4					00004	
0009						00005	
						00006	
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						OU 1	
						OU 2	
						OU 2A	
						OU 2B	
						OU 2C	
						OU 3	

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M60050 / 001069	12-11-1995 08-31-1995	MCAS EL TORO	RAB MAILING LIST (PARTIALLY PRIVILEGED AND CONFIDENTIAL)	ADMIN RECORD CONFIDENTIAL DOC	MAILING LST RAB	00001 00002	PIERCE LEAHY 80462364
MISC NONE 0009	NONE 10.4	RAB MEMBERS				00003 00004 00005 00006 00007 00008 00009 00010 00011 00012 00013 00014 00015 00016 00017 00018 00019 00020 00021 00022 00024 00025 OU 1 OU 2 OU 2A OU 2B OU 2C OU 3	

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UIC No. / Rec. No. Doc. Control No. Record Type Contr./Guid. No. *Approx. # Pages*	Prc. Date Record Date CTO No. *EPA Cat. #*	Author Affil. Author Recipient Affil. Recipient	Subject	Classification	Keywords	Sites	Location Box No.
M60050 / 000986 MISC NONE 0008	10-04-1995 **09-01-1995** NONE 10.4	JACOBS ENGINEERING COMMUNITY MEMBER	FACT SHEET NO. 4 (WITH MAILING LIST)	ADMIN RECORD	EE/CA PUB. PARTICIPAT PUBNOT	00004 00007 00011 00013 00014 00019 00020	SOUTHWEST DIVISION NONE
M60050 / 000987 MISC NONE 0008	10-04-1995 **09-01-1995** NONE 10.4	JACOBS ENGINEERING COMMUNITY MEMBER	PUBLIC NOTICE ANNOUNCING AVAILABILITY FOR PUBLIC REVIEW OF EE/CA FOR SITE 4,7,11,13,14,19, & 20	ADMIN RECORD	EE/CA PUB. PARTICIPAT	00004 00007 00011 00013 00014 00019 00020	SOUTHWEST DIVISION NONE

UIC No. / Rec. No. Doc. Control No. Record Type Contr./Guid. No. Approx. # Pages	Prc. Date Record Date CTO No. EPA Cat. #	Author Affil. Author Recipient Affil. Recipient	Subject	Classification	Keywords	Sites	Location Box No.
M60050 / 001055 LTR NONE 0001	12-11-1995 09-05-1995 NONE 10.1	BROWN,PISTONE, HU G.F. HURLEY SOUTHWEST DIVISION J. JOYCE	REQUEST FOR APPLICATION FOR MEMBERSHIP IN THE MCAS EL TORO RAB	ADMIN RECORD	RAB	00001 00002 00003 00004 00005 00006 00007 00008 00009 00010 00011 00012 00013 00014 00015 00016 00017 00018 00019 00020 00021 00022 00024 00025 OU 1 OU 2 OU 2A OU 2B OU 2C OU 3	PIERCE LEAHY 80462364

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M60050 / 001056 LTR NONE 0002	12-11-1995 09-12-1995 NONE 02.7	CITY OF IRVINE P. HERSH SOUTHWEST DIVISION J. JOYCE	CONCERNS WITH COMMENTS DISCUSSED AT THE RAB MEETING ON AUGUST 31, 1995 REGARDING THE EE/CA FOR SITES 4,7, 11,13,14,19, & 20	ADMIN RECORD	COMMENTS RAB	00004 00007 00011 00013 00014 00019 00020 OU 3	PIERCE LEAHY 80462364

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UIC No. / Rec. / Doc. Control No. / Record Type / Contr./Guid. No. / Approx. # Pages	Prc. Date / Record Date / CTO No. / EPA Cat. #	Author Affil. / Author / Recipient Affil. / Recipient	Subject	Classification	Keywords	Sites	Location Box No.
M60050 / 001057 LTR N68711-92-D-4670 0008	12-11-1995 09-14-1995 00063 10.3	BECHTEL NATIONAL D.K. COWSER SOUTHWEST DIVISION L. NUZUM	DRAFT AGENDA AND PUBLICE NOTICE SEPTEMBER 28, 1995 WITH RAB MAILING LIST (DOCUMENT MADE DISCLOSABLE)	ADMIN RECORD CONFIDENTIAL DOC	MAILING LST PUB. PARTICIPAT RAB	00001 00002 00003 00004 00005 00006 00007 00008 00009 00010 00011 00012 00013 00014 00015 00016 00017 00018 00019 00020 00021 00022 00024 00025 OU 1 OU 2 OU 2A OU 2B OU 2C OU 3	PIERCE LEAHY 80462364

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UIC No. / Rec. No. Doc. Control No. Record Type Contr./Guid. No. Approx. # Pages	Prc. Date Record Date CTO No. EPA Cat. #	Author Affil. Author Recipient Affil. Recipient	Subject	Classification	Keywords	Sites	Location Box No.
M60050 / 001062 MM NONE 0012	12-11-1995 09-28-1995 NONE 10 4	MCAS EL TORO COMMUNITY MEMBER	SEPTEMBER 28, 1995 RAB MEETING MINUTES WITH ATTENDANCELIST (PARTIACLLY PRIVELEGED AND CONFIDENTIAL)	ADMIN RECORD CONFIDENTIAL DOC INFO REPOSITORY	MTG MINS PUB. PARTICIPAT RAB	00001 00002 00003 00004 00005 00006 00007 00008 00009 00010 00011 00012 00013 00014 00015 00016 00017 00018 00019 00020 00021 00022 00024 00025 OU 1 OU 2 OU 2A OU 2B OU 2C OU 3	PIERCE LEAHY 80462364

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UIC No. / Rec. No. Doc. Control No. Record Type Contr./Guid. No. Approx. # Pages	Prc. Date Record Date CTO No. EPA Cat. #	Author Affil. Author Recipient Affil. Recipient	Subject	Classification	Keywords	Sites	Location Box No.
M60050 / 001065 MISC NONE 0004	12-11-1995 10-01-1995 NONE 10.6	MCAS EL TORO COMMUNITY MEMBER	FACT SHEET NO. 4 "UPDATE ON ENVIRONMENTAL RESTORATION PROGRAM AT MCAS EL TORO"	ADMIN RECORD	EE/CA PUBNOT	00004 00007 00011 00013 00014 00019 00020 OU 3	PIERCE LEAHY 80462364
M60050 / 001328 MISC NONE 0001	03-18-1996 10-11-1995 00063 10.3	BECHTEL NATIONAL MCAS EL TORO	PUBLIC NOTICE ANNOUNCING EXTENSION OF PUBLIC COMMENT PERIOD FOR EE/CA FOR SITES 4, 7, 11, 13, 14, 19 AND 20	ADMIN RECORD	EE/CA PUBNOT	00004 00007 00011 00013 00014 00019 00020	PIERCE LEAHY 80462353

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UIC No. / Rec. No. Doc. Control No. Record Type Contr./Guid. No. Approx. # Pages	Prc. Date Record Date CTO No. EPA Cat. #	Author Affil. Author Recipient Affil. Recipient	Subject	Classification	Keywords	Sites	Location Box No.
M60050 / 001070 MISC NONE 0008	12-11-1995 10-12-1995 NONE 10.4	MCAS EL TORO J. JOYCE RAB MEMBERS	NOTICE OF RAB MEETING FOR OCTOBER 26, 1995 AND RAB MAILING LIST (PARTIALLY PRIVILEGED AND CONFIDENTIAL)	ADMIN RECORD CONFIDENTIAL DOC INFO REPOSITORY	PUB. PARTICIPAT PUBNOT RAB	00001 00002 00003 00004 00005 00006 00007 00008 00009 00010 00011 00012 00013 00014 00015 00016 00017 00018 00019 00020 00021 00022 00024 00025 OU 1 OU 2 OU 2A OU 2B OU 2C OU 3	PIERCE LEAHY 80462364

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UIC No. / Rec. No. Doc. Control No. Record Type Contr./Guid. No. Approx. # Pages	Prc. Date Record Date CTO No. EPA Cat. #	Author Affil. Author Recipient Affil. Recipient	Subject	Classification	Keywords	Sites	Location Box No.
M60050 / 001428 MISC NONE 0004	04-03-1996 **10-18-1995** 00063 10.0	VARIOUS NEWSPAPE PUBLIC	PUBLIC NOTICE ANNOUNCING PUBLIC COMMENT PERIOD FOR EE/CAS FOR SITES 4,7,11,13,14,19, AND 20 APPEARING IN OC REGISTER AND LA TIMES	ADMIN RECORD	EE/CA PUB. PARTICIPAT PUBNOT	00004 00007 00011 00013 00014 00019 00020	PIERCE LEAHY 80462355
M60050 / 001391 MISC NONE 0003	03-20-1996 **11-17-1995** NONE 10 6	MCAS EL TORO B. BARTELT BECHTEL NATIONAL A. SCHWARTZ	FAX OF PRESS RELEASE ANNOUNCING EXTENSION OF PUBLIC COMMENT PERIOD ON THE SEVEN SITES EE/CA	ADMIN RECORD	EE/CA PRESS REL PUB. PARTICIPAT PUBNOT	00004 00007 00011 00013 00014 00015 00016 00019 00020 OU 3	PIERCE LEAHY 80462354
M60050 / 001200 LTR NONE 0005	01-23-1996 **12-04-1995** NONE 05.4	MCAS EL TORO J. JOYCE EPA SAN FRANCISC F. FELTER	LETTER TRANSMITTING COPY OF PUBLIC NOTICE EXTENDING PUBLIC COMMENT PERIOD ON EE/CA AND PRESS RELEASE ANNOUNCING EXTENDED COMMENT PERIOD	ADMIN RECORD	COMMENTS EE/CA	00004 00007 00011 00013 00014 00019 00020 OU 3	SOUTHWEST DIVISION NONE

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UIC No. / Rec. No.								
Doc. Control No.	Prc. Date	Author Affil.						
Record Type	Record Date	Author						
Contr./Guid. No.	CTO No.	Recipient Affil.						Location
Approx. # Pages	EPA Cat. #	Recipient	Subject	Classification		Keywords	Sites	Box No.
M60050 / 001381	03-19-1996	BECHTEL NATIONAL	REQUEST FOR PETROLEUM EXCLUSION FOR SELECTED OPERABLE UNIT 3 SITES MCAS EL TORO - DRAFT FOR DISCUSSION PURPOSES ONLY	ADMIN RECORD	OU		00001	PIERCE LEAHY 80462354
	01-01-1996						00004	
MISC	NONE						00006	
NONE	06.3	SOUTHWEST DIVISION					00007	
0040							00008	
							00009	
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							00022	
							OU 3	

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UIC No. / Rec. No. Doc. Control No. Record Type Contr./Guid. No. Approx. # Pages	Prc. Date Record Date CTO No. EPA Cat. #	Author Affil. Author Recipient Affil. Recipient	Subject	Classification	Keywords	Sites	Location Box No.
M60050 / 001433 MISC N6871192D467000 0021	04-03-1996 01-12-1996 00063 10.0	BECHTEL NATIONAL D. COWSER SOUTHWEST DIVISION P. KENNEDY	30 NOVEMBER 1995 RESTORATION ADVISORY BOARD DRAFT MEETING MINUTES ALSO INCLUDES SIGN-IN SHEETS, FLIER, AND RAB MAILING LIST	ADMIN RECORD INFO REPOSITORY	MTG MINS OU PUB. PARTICIPAT RAB	00001 00002 00003 00004 00005 00006 00007 00008 00009 00010 00011 00012 00013 00014 00015 00016 00017 00018 00019 00020 00021 00022 00024 00025 OU 1 OU 2 OU 3	PIERCE LEAHY 80462355

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M60050 / 001402 MISC NONE 0025	03-20-1996 02-27-1996 00063 10 0	MCAS EL TORO C. WIEMERT BECHTEL NATIONAL B. COLEMAN	DOCUMENTS FOR 23 AND 24 FEBRUARY 1996 MCAS EL TORO RAB TOUR INCLUDES TOUR INFORMATION, PUBLIC NOTICE AND TOWN HALL FLIER	ADMIN RECORD INFO REPOSITORY	PUB. PARTICIPAT RAB	00001 00002 00003 00004 00005 00006 00007 00008 00009 00010 00011 00012 00013 00014 00015 00016 00017 00018 00019 00020 00021 00024 00025 OU 1 OU 2 OU 3	PIERCE LEAHY 80462354

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M60050 / 001980 MISC NONE 0100	09-18-1997 **07-31-1996** NONE 10.3	MCAS EL TORO RAB MEMBERS	PUBLIC INFORMATION MATERIALS FOR JULY 31, 1996, RAB MEETING-AGENDA, HANDOUTS	ADMIN RECORD INFO REPOSITORY	BRAC CLEANUP GW LANDFILL MTG MINS PUB. PARTICIPAT PUBNOT RAB SOIL UST VOC WATER	00002 00003 00005 00015 00017 00018 00019 00020 00024 00025 OU 1 OU 2A OU 2B OU 2C OU 3 TANK 398	SOUTHWEST DIVISION NONE
M60050 / 001671 XMTL N6871192D467000 0013	09-30-1996 **09-11-1996** 0063B 10.5	BNI SAN DIEGO D. COWSER SOUTHWEST DIVISION R. SELBY	SEPTEMBER 25, 1996, DRAFT RAB MEETING AGENDA SITE (B) BASEWIDE COMMUNITY RELATIONS SUPPORT MEETING MAILER & JULY 31, 1996 DRAFT MEETING MINUTES	ADMIN RECORD INFO REPOSITORY	CRP MTG MINS NFA PUB. PARTICIPAT RAB	00002 00004 00007 00011 00013 00014 00017 00019 00020 B OU 2A	PIERCE LEAHY 80462359

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UIC No. / Rec. No. Doc. Control No. Record Type Contr./Guid. No. Approx. # Pages	Prc. Date Record Date CTO No. EPA Cat. #	Author Affil. Author Recipient Affil. Recipient	Subject	Classification	Keywords	Sites	Location Box No.
M60050 / 001983 MISC NONE 0068	09-18-1997 09-25-1996 NONE 10.4	MCAS EL TORO RAB MEMBERS	PUBLIC INFORMATION MATERIALS FOR SEPTEMBER 25, 1996, MEETING-AGENDA, HANDOUTS, & MINUTES OF JULY 31, 1996 RAB MTG., SIGN-IN SHEETS, REV. "BLUE SHEET"	ADMIN RECORD INFO REPOSITORY	CLEANUP MTG MINS PUB. PARTICIPAT PUBNOT SOIL	00002 00003 00005 00015 00017 00018 00019 00020 00024 00025 OU 1 OU 2A OU 2B OU 2C OU 3 TANK 398	SOUTHWEST DIVISION NONE

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UIC No. / Rec. No. Doc. Control No. Record Type Contr./Guid. No. Approx. # Pages	Prc. Date Record Date CTO No. EPA Cat. #	Author Affil. Author Recipient Affil. Recipient	Subject	Classification	Keywords	Sites	Location Box No.
M60050 / 001737 RPT N6871192D467000 3050	03-17-1997 03-11-1997 00073 03.4	BECHTEL NATIONAL G. BROOKS SOUTHWEST DIVISION	DRAFT FINAL PHASE II REMEDIAL INVESTIGATION REPORT OPERABLE UNIT 2A-SITE 24 VOLUME I, VOLUME II, VOLUME III, APPENDICES A-J, VOLUME IV, APPENDICES K-P	ADMIN RECORD INFO REPOSITORY	RI	00007 00008 00009 00010 00011 00012 00022 00024 00025 BLDG. 296 BLDG. 297 BLDG. 299 BLDG. 326 BLDG. 359 BLDG. 360 BLDG. 529 BLDG. 655 BLDG. 800 OU 1 OU 2A OU 3	PIERCE LEAHY 80462363

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M60050 / 001934 MISC N6871192D467000 0017	05-28-1997 05-28-1997 0063B 10.4	BECHTEL NATIONAL C. CARLISLE VARIOUS AGENCIES	SITE (B) BASEWIDE COMMUNITY RELATIONS SUPPORT-INCLUDESMAY 28, 1997 RAB AGENDA, MARCH 26, 1997 DRAFT MEETING MINUTES, PUBLIC NOTICE & (MAILING LIST IN CONFIDNTL)	ADMIN RECORD CONFIDENTIAL DOC INFO REPOSITORY	CRP MTG MINS PUB. PARTICIPAT RAB	00001 00002 00003 00004 00005 00006 00007 00008 00010 00011 00012 00013 00015 00016 00017 00019 00020 00021 00022 00024 00025 OU 1 OU 2C OU 3 OU 3A	SOUTHWEST DIVISION NONE

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M60050 / 001974 MISC NONE 0150	09-18-1997 05-28-1997 NONE 10.3	MCAS EL TORO RAB MEMBERS	PUBLIC INFORMATION MATERIALS FOR MAY 28,1997, RAB MEETING-AGENDA, HANDOUTS & DRAFT MEETING MINUTES FROM MARCH 26, 1997 RAB MEETING	ADMIN RECORD INFO REPOSITORY	MTG MINS PUB. PARTICIPAT PUBNOT RAB	00002 00004 00006 00008 00009 00010 00011 00012 00013 00015 00016 00017 00019 00020 00021 00022 00024 00025 OU 2A OU 2B OU 3 OU 3A	SOUTHWEST DIVISION NONE

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M60050 / 001986 FAX NONE 0005	09-18-1997 09-05-1997 NONE 01 6	MCAS EL TORO J. JOYCE VARIOUS AGENCIES	ADVANCED SUBMITTAL OF FFA EXTENSION REQUEST FOR CHANGES TO THE DRAFT FINAL INTERIM RECORD OF DECISION (ROD) FOR OU 2A, OU 2B AND OU 2C	ADMIN RECORD	FFA REQUEST ROD	00001 00002 00003 00004 00005 00006 00007 00008 00009 00010 00011 00012 00013 00014 00015 00016 00017 00018 00019 00020 00021 00022 00024 00025 OU 1 OU 2A OU 2B OU 2C OU 3	SOUTHWEST DIVISION NONE

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M60050 / 001987 LTR NONE 0006	09-18-1997 09-18-1997 NONE 01.6	MCAS EL TORO J. JOYCE VARIOUS AGENCIES (BCT)	SUBMITTAL OF FFA EXTENSION REQUEST FOR CHANGES ON THE DRAFT FINAL INTERIM RECORD OF DECISION (ROD) FOR OU 2A, OU 2B AND OU 2C	ADMIN RECORD	CLEANUP FFA REQUEST ROD TECH/GUID DOC. VOC	00001 00002 00003 00004 00005 00006 00007 00008 00009 00010 00011 00012 00013 00014 00015 00016 00017 00018 00019 00020 00021 00022 00024 00025 OU 1 OU 2A OU 2B OU 2C OU 3	SOUTHWEST DIVISION NONE

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UIC No. / Rec. No. Doc. Control No. Record Type Contr./Guid. No. Approx. # Pages	Prc. Date Record Date CTO No. EPA Cat. #	Author Affil. Author Recipient Affil. Recipient	Subject	Classification	Keywords	Sites	Location Box No.
M60050 / 001978 MISC N6871192D467000 0015	09-18-1997 **09-24-1997** 0063B 10.4	BECHTEL NATIONAL D. TEDALDI VARIOUS AGENCIES	RAB MEETING MAILER, AGENDA, & PUBLIC NOTICE OF SEPTEMBER 24, 1997, RAB MEETING MINUTES OF AUGUST 6, 1997 (MAILER IN CONFIDENTIAL FILE)	ADMIN RECORD CONFIDENTIAL DOC INFO REPOSITORY	CLEANUP CRP FFA INVESTIGATION MTG MINS PUB. PARTICIPAT RAB ROD SOIL	00001 00004 00006 00007 00008 00009 00010 00011 00012 00013 00014 00015 00016 00019 00020 00021 00022 00024 00025 OU 2A OU 3 OU 3A OU 3B	SOUTHWEST DIVISION NONE

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UIC No. / Rec. No. Doc. Control No. Record Type Contr./Guid. No. Approx. # Pages	Prc. Date Record Date CTO No. EPA Cat. #	Author Affil. Author Recipient Affil. Recipient	Subject	Classification	Keywords	Sites	Location Box No.
M60050 / 002039 MISC NONE 0071	11-24-1997 09-24-1997 NONE 10.6	MCAS EL TORO RAB RAB MEMBERS	SEPTEMBER 24, 1997, RAB MEETING; PUBLIC INFORMATION MATERIALS INCLUDES: RAB MTG.AGENDA, PUBLIC NOTICE, RAB MTG.MINS OF 8/6/97, MISC. AGENCIES COMMENTS	ADMIN RECORD INFO REPOSITORY	COMMENTS MTG MINS PUB. PARTICIPAT PUBNOT RAB	00001 00004 00006 00007 00008 00009 00010 00011 00012 00013 00014 00015 00016 00019 00020 00021 00022 00024 OU 2A OU 3 OU 3A	SOUTHWEST DIVISION NONE
M60050 / 002026 LTR NONE 0049	11-21-1997 10-29-1997 NONE 01.6	DTSC LONG BEACH M. MINGAY VARIOUS AGENCIES	RESPONSIVENESS SUMMARY FOR PROPOSED PLAN OU 2A VADOSE ZONE; FORWARDED TO INDIVIDUALS WHO SUBMITTED COMMENTS (MAILING LIST IN CONFIDENTIAL FILE)	ADMIN RECORD CONFIDENTIAL DOC	COMMENTS OU PUB. PARTICIPAT	00007 00008 00009 00010 00011 00022 00024 BLDG. 296 BLDG. 297 OU 2A	SOUTHWEST DIVISION NONE

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M60050 / 002055 MISC N6871192D467000 0022	01-29-1998 **01-21-1998** 00155 10.4	BECHTEL NATIONAL D. TEDALDI VARIOUS AGENCIES	JANUARY 28, 1998, RAB MEETING AGENDA,AND PUBLIC NOTICERAB AND NON RAB MEMBER SIGN-IN SHEET; DECEMBER 3, 1997MEETING MINUTES (MAILER IN CONFIDENTIAL FILE)	ADMIN RECORD CONFIDENTIAL DOC INFO REPOSITORY	CLEANUP CLOSURE MTG MINS PUB. PARTICIPAT RAB	00001 00002 00003 00004 00005 00017 OU 2B OU 2C OU 3A OU 3B	SOUTHWEST DIVISION NONE
M60050 / 002147 MM N6871192D467000 0023	03-30-1998 **03-12-1998** 00155 10.4	BECHTEL NATIONAL D. TEDALDI SOUTHWEST DIVISION R. SELBY	BASEWIDE COMMUNITY RELATIONS SUPPORT-MARCH 25, 1998 RAB AGENDA, JANUARY 28, 1998 MEETING MINUTES, RAB SIGN-IN SHEETS (MAILER IN CONFIDENTIAL FILE)	ADMIN RECORD CONFIDENTIAL DOC INFO REPOSITORY	COMMENTS CRP FS LANDFILL MTG MINS PUB PARTICIPAT RAB	00002 00003 00005 00007 00008 00011 00012 OU 2B OU 2C OU 3 OU 3A	SOUTHWEST DIVISION NONE
M60050 / 002250 CTO-0155/0217 PLAN N68711-92-D-4670 0013	08-31-1998 **07-24-1998** 155-2 03.3	BECHTEL NATIONAL D. TEDALDI VARIOUS AGENCIES	DRAFT PROPOSED PLAN FOR CLEANUP AT THREE SHALLOW SOIL SITES, OPERABLE UNIT 3, SITES 8, 11, AND 12	ADMIN RECORD	CLEANUP IRP NFA PUB. PARTICIPAT SOIL	00008 00011 00012 OU 3	SOUTHWEST DIVISION NONE
M60050 / 002255 MM N6871192D467000 0019	08-31-1998 **07-27-1998** 00155 10.4	BECHTEL NATIONAL D. TEDALDI VARIOUS AGENCIES	RAB MEETING MAILER - RAB MEETING AGENDA & PUB. NOTICE FOR 7/29/98 RAB MEET; RAB MEETING MINUTES, 6/24/98 RABMEETING MINUTES (MAILING LIST IN CONFIDENTIAL FILE)	ADMIN RECORD CONFIDENTIAL DOC INFO REPOSITORY	FFA LANDFILL PUB PARTICIPAT PUBNOT RAB RADIATION VOC	00007 00008 00011 00012 00014 00016 OU 3 OU 3A	SOUTHWEST DIVISION NONE

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M60050 / 002253 MM NONE 0060	08-31-1998 07-29-1998 NONE 10.4	MCAS EL TORO RAB MEMBERS	PUBLIC INFORMATION MATERIALS FOR 7/29/98 RAB MEETING INCLUDING AGENDA/PUBLIC NOTICE, 6/24/98 FINAL MEETING MINUTES AND MISCELLANEOUS HANDOUTS	ADMIN RECORD INFO REPOSITORY	CLEANUP FS PUB. PARTICIPAT RAB RADIATION SV	00007 00008 00011 00012 00014 00016 OU 3 OU 3A	SOUTHWEST DIVISION NONE
M60050 / 002285 MM N6871192D467000 0030	10-06-1998 09-17-1998 00155 10.4	BECHTEL NATIONAL D. TEDALDI VARIOUS AGENCIES	RAB MEETING MAILER-RAB MEETING AGENDA & PUBLIC NOTICE FOR 9/30/98 RAB MEETING, 7/29/98 RAB MEETING MINUTES (SIGN-IN SHEETS & MAILING LIST IN CONFIDENTIAL FILE)	ADMIN RECORD CONFIDENTIAL DOC INFO REPOSITORY	CLOSURE LANDFILL MTG MINS PUB. PARTICIPAT PUBNOT RAB SVEI UST	00007 00008 00011 00012 00014 00016 00024 OU 3	SOUTHWEST DIVISION NONE
M60050 / 002299 MISC NONE 0011	12-22-1998 09-21-1998 NONE 10.1	DTSC CYPRESS T. MAHMOUD MCAS EL TORO J. JOYCE	COMMENTS ON DRAFT PROPOSED PLAN FOR OPERABLE UNIT 3, SITES 8, 11 AND 12	ADMIN RECORD	COMMENTS LANDFILL NFA OU SOIL	00008 00011 00012 OU 3	SOUTHWEST DIVISION NONE
M60050 / 002289 MM NONE 0175	10-06-1998 09-30-1998 NONE 10.4	MCAS EL TORO RAB MEMBERS	PUB INFO MATERIALS FOR 9/30/98 RAB MEETING; INCLUDING AGENDA, PUBLIC NOTICE, 7/29/98 MEETING MINUTES AND MISCELLANEOUS HANDOUTS (SIGN-IN SHEETS IN CONF FILE)	ADMIN RECORD CONFIDENTIAL DOC INFO REPOSITORY	CLOSURE LANDFILL MTG MINS PUB. PARTICIPAT PUBNOT RAB SVEI UST	00002 00007 00008 00011 00012 00014 00017 00024 OU 2A OU 2B OU 3	SOUTHWEST DIVISION NONE

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M60050 / 002295 MISC NONE 0012	11-17-1998 11-03-1998 NONE 01.1	MCAS EL TORO J. JOYCE VARIOUS AGENCIES	FEDERAL FACILITY AGREEMENT (FFA) APPENDIX A SCHEDULE EXTENSION REQUEST FOR DRAFT RECORD OF DECISION, OPERABLE UNIT 2C, LANDFILL SITES 3 AND 5	ADMIN RECORD	FFA LANDFILL ROD	00001 00002 00003 00004 00005 00006 00007 00008 00009 00010 00011 00012 00013 00014 00015 00016 00017 00018 00019 00020 00021 00022 00024 OU 1 OU 2A OU 2B OU 2C OU 3	SOUTHWEST DIVISION NONE

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M60050 / 002298 MM N6871192D467000 0031	11-25-1998 **11-25-1998** 00155 10.4	BECHTEL NATIONAL D. TEDALDI VARIOUS AGENCIES	RAB MEETING MAILER: AGENDA AND PUBLIC NOTICE FOR 12/2/98 RAB MEETING, RAB MEETING MINUTES, 9/30/98 RAB MEETING MINUTES (RAB MAILING LIST IN CONF FILE)	ADMIN RECORD CONFIDENTIAL DOC INFO REPOSITORY	MTG MINS PUB. PARTICIPAT PUBNOT RAB ROD SOIL	00002 00003 00005 00007 00008 00011 00012 00014 00016 00017 00024 OU 2A OU 2B OU 2C OU 3	SOUTHWEST DIVISION NONE
M60050 / 002303 MM NONE 0100	12-22-1998 **12-02-1998** NONE 10.4	MCAS EL TORO RAB MEMBERS	PUBLIC INFORMATION MATERIALS FOR DECEMBER 2, 1998 RAB MEETING; AGENDA, PUBLIC NOTICE, SEPTEMBER 30, 1998 RAB MEETING MINUTES AND MISCELLANEOUS HANDOUTS	ADMIN RECORD INFO REPOSITORY	GW LANDFILL MTG MINS PUB. PARTICIPAT PUBNOT RAB UST	00001 00002 00007 00008 00011 00012 00014 00016 00017 00018 00024 OU 1 OU 2A OU 2B OU 2C OU 3A OU 3B	SOUTHWEST DIVISION NONE

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M60050 / 002401 MISC NONE 0120	05-03-1999 **01-27-1999** NONE 10 4	MCAS EL TORO RAB MEMBERS	PUBLIC INFORMATION MATERIALS FROM JANUARY 27, 1999 RESTORATION ADVISORY BOARD MEETING, INDLUDING PUBLIC NOTICE, AGENDA, HANDOUTS, 12/2/98 RAB MEETING MINUTES	ADMIN RECORD	MTG MINS PUB PARTICIPATI PUBNOT RAB VOC	00008 00011 00012 00024 OU 2A OU 3	SOUTHWEST DIVISION NONE
M60050 / 002377 LTR NONE 0007	04-12-1999 **01-29-1999** NONE 10 1	EPA G KISTNER MCAS EL TORO J JOYCE	U S EPA COMMENTS ON DRAFT RECORD OF DECISION		COMMENTS OU ROD	00002 00007 OU 2B	SOUTHWEST DIVISION NONE
M60050 / 002383 CTO-0155/0402 PLAN N6871192D467000 0034	04-13-1999 **02-04-1999** 00155 02 1	SWDIV G TINKER VARIOUS AGENCIES	DRAFT FINAL PROPOSED PLAN FOR CLEANUP AT THREE SHALLOW SOIL SITES	ADMIN RECORD INFO REPOSITORY	CLEANUP OU PROPOSED PLAN SOIL	11 12 8 OU 3	SOUTHWEST DIVISION NONE
M60050 / 002389 LTR N6871192D467000 0020	04-13-1999 **02-19-1999** 00155 10 1	SWDIV G TINKER VARIOUS AGENCIES	RESPONSE TO COMMENTS DRAFT PROPOSED PLAN FOR CLEANUP AT THREE SHALLOW SOIL SITES OU 3, SITES 8, 11, AND 12		CLEANUP COMMENTS OU PROPOSED PLAN	00008 00011 00012 OU 3	SOUTHWEST DIVISION NONE
M60050 / 002390 LTR NONE 0020	04-13-1999 **02-22-1999** NONE 10 1	DTSC J HUFF MCAS EL TORO J JOYCE	COMMENTS ON DRAFT FINAL PROPOSED PLAN FOR OU 3 SITES 8, 11 AND 12		COMMENTS OU PROPOSED PLAN	00008 00011 00012 OU 3	SOUTHWEST DIVISION NONE
M60050 / 002395 LTR N68711-92-D-4670 0030	04-13-1999 **03-17-1999** 00155 10 1	SWDIV G TINKER VARIOUS AGENCIES	RESPONSE TO COMMENTS ON THE DRAFT FINAL PROPOSED PLAN FOR CLEANUP AT OPERABLE UNIT 3, SITES 8, 11, AND 12	ADMIN RECORD	COMMENTS OU PROPOSED PLAN RESPONSE SOIL	00008 00011 00012 OU 3	SOUTHWEST DIVISION NONE

UIC No. / Rec. No. Doc. Control No. Record Type Contr./Guid. No. Approx. # Pages	Prc. Date Record Date CTO No. EPA Cat. #	Author Affil. Author Recipient Affil. Recipient	Subject	Classification	Keywords	Sites	Location Box No.
M60050 / 002396 CTO-0155/0446 PLAN N68711-92-D-4670 0030	04-13-1999 03-17-1999 00155 03.3	SWDIV G. TINKER VARIOUS AGENCIES	REVISED DRAFT FINAL - PROPOSED PLAN FOR CLEANUP AT THREE SHALLOW SOIL SITES	ADMIN RECORD INFO REPOSITORY	CLEANUP LF METALSPCB OU PAH PETROLEUM PROPOSED PLAN ROD SOIL SVOC VOC	11 12 8 OU 3	SOUTHWEST DIVISION NONE
M60050 / 000421 CTO-0155/0482 PLAN N68711-92-D-4670 0050	04-19-2000 05-01-1999 155-2	BECHTEL NATIONAL, INC. D. TEDALDI NAVFAC - SOUTHWEST DIVISION R. SELBY	FINAL PROPOSED PLAN - FOR CLEANUP AT THREE SHALLOW SOIL SITES (MAILING LIST IS CONFIDENTIAL)	ADMIN RECORD CONFIDENTIAL	ARAR GW LF METALS NFA OU PAH PCB PESTICIDES PP REMEDIAL ACTIO ROD SOIL SVOC VOC	11 12 8 OU 3	SOUTHWEST DIVISION
M60050 / 002407 PLAN NONE 0000	05-04-1999 05-06-1999 NONE 03.3	SWDIV G. TINKER VARIOUS AGENCIES	FINAL - PROPOSED PLAN FOR CLEANUP	ADMIN RECORD	CLEANUP OU PROPOSED PLAN SOIL	00008 00011 00012 OU 3	SOUTHWEST DIVISION NONE

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M60050 / 000056 NONE MEMO NONE 0005	08-04-1999 05-26-1999 NONE 10 4	HAHN & BOWERSOCK CORP J. BURGNER SOUTHWEST DIVISION	TRANSCRIPT OF 5/26/99 PUBLIC COMMENT MEETING FOR PROPOSED PLAN FOR CLEANUP AT OPERABLE UNIT 3, SITES 8, 11 AND 12	ADMIN RECORD	MTG MINS SOIL	11 12 8 OU 3	SOUTHWEST DIVISION NONE
M60050 / 000066 NONE MM NONE 0100	08-04-1999 05-26-1999 NONE 10.5	MCAS EL TORO PUBLIC INTEREST	PUBLIC INFORMATION MATERIALS FOR PUBLIC MEETING HELD 5/26/99 ON PROPOSED PLAN FOR CLEANUP AT OPERABLE UNIT 3, SITES 8, 11 AND 12	ADMIN RECORD	IRP RAB SOIL VOC WATER WELLS	11 12 8 OU 3	SOUTHWEST DIVISION NONE
M60050 / 000422 CTO-0155/0471 PLAN N68711-92-D-4670 0030	04-19-2000 06-01-1999 155-2	BECHTEL NATIONAL, INC. D. TEDALDI NAVFAC - SOUTHWEST DIVISION R. SELBY	SIGN-OFF VERSION FINAL PROPOSED PLAN FOR CLEANUP AT THREE SHALLOW SOIL SITES	ADMIN RECORD	METALS NFA OU PAH PCB PESTICIDES REMEDIAL ACTIO SLUDGE SOIL SVOC	11 12 8 OU 3	SOUTHWEST DIVISION
M60050 / 000060 NONE LTR NONE 0004	08-04-1999 06-07-1999 NONE 03.1	EL TORO MASTER DEVELOPMENT PRO C. WIERCIOCH MCAS EL TORO J JOYCE	COMMENTS ON PROPOSED PLAN FOR CLEANUP AT OPERABLE UNIT 3, SITES 8, 11 AND 12	ADMIN RECORD	COMMENTS ROD SOIL	11 12 17 2 8 OU 3	SOUTHWEST DIVISION NONE
M60050 / 000064 NONE LTR NONE 0002	08-04-1999 06-07-1999 NONE 05 4	BL ASSOCIATES C. BENNETT MCAS EL TORO J. JOYCE	COMMENTS BY RESTORATION ADVISORY BOARD COMMUNITY CO-CHAIR ON THE PROPOSED PLAN FOR OPERABLE UNIT 3, SITES 8, 11 AND 12	ADMIN RECORD	CERCLA COMMENTS ROD SOIL	11 12 8 OU 3	SOUTHWEST DIVISION NONE

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M60050 / 000061 NONE LTR NONE 0000	08-04-1999 06-15-1999 NONE 10.1	USDOI J. BARTEL BRAC EL TORO J JOYCE	DEPT. OF INTERIOR COMMENTS ON PROPOSED PLAN FOR CLEANUP AT OPERABLE UNIT 3, SITES 8, 11 AND 12	ADMIN RECORD	COMMENTS LF PAH PCB ROD SOIL VOC	11 12 17 2 8 OU 3	SOUTHWEST DIVISION NONE
M60050 / 000059 CTO-0164/0053 RPT N68711-92-D-4670 0015	08-04-1999 07-19-1999 00164 10.1	BNI T. HEIRONIMUS SOUTHWEST DIVISION R. SELBY	DRAFT - RESPONSIVENESS SUMMARY ASSOCIATED WITH DRAFT RECORD OF DECISION FOR OPERABLE UNIT 3, SITES 8, 11 AND 12 (REF. A R. #72)	ADMIN RECORD	COMMENTS LF ROD SOIL	11 12 8 OU 3	SOUTHWEST DIVISION NONE
M60050 / 000134 NONE MISC NONE 0100	09-09-1999 07-28-1999 NONE 10 4	EL TORO RAB RAB MEMBERS	PUBLIC INFORMATION MATERIALS FROM 7/28/99 RESTORATION ADVISORY BOARD MEETING WITH 5/26/99 RAB MEETING MINUTES AND VARIOUS HANDOUTS	ADMIN RECORD	MTG MINS RAB	1 12 17 2 24 3 5 8 OU 1 OU 2A OU 3	SOUTHWEST DIVISION NONE
M60050 / 000112 NONE MISC NONE 0010	09-09-1999 08-12-1999 NONE 10.1	EL TORO MASTER DEVELOPMENT PRO M. LAPIN MCAS EL TORO D. GOULD	LOCAL REDEVELOPMENT AUTHORITY COMMENTS ON THE DRAFT RECORD OF DECISION FOR SITES 8, 11 AND 12 (REF. A R. #72 & #406)	ADMIN RECORD	COMMENTS LF ROD SOIL	11 12 8 OU 3	SOUTHWEST DIVISION NONE

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M60050 / 000143 CTO-0178/0076 RPT N68711-92-D-4670 2530	*09-09-1999* **09-07-1999** 00178 03.4	BECHTEL NATIONAL INC T. HEIRONIMUS VARIOUS AGENCIES	DRAFT - PHASE II REMEDIAL INVESTIGATION REPORT, ATTACHMENTS O AND P, FOR OPERABLE UNIT 3B, SITES 7 AND 14 (INCLUDES REPLACEMENT COVER PAGES FOR VOLS II & III, DATED MARCH 2000 - CTO 0178/0107-2) (REF. #331, #358)	ADMIN RECORD INFO REPOSITORY	METALS RI SOIL VOC	14 7 OU 3B	SOUTHWEST DIVISION NONE
M60050 / 000352 NONE MM NONE 0003	04-13-2000 **11-19-1999** NONE	KENNEDY/JENKS CONSULTANTS R. OUELLETTE BECHTEL NATIONAL, INC. B. COLEMAN	RESTORATION ADVISORY BOARD (RAB) TECHNICAL REVIEW SUBCOMMITTEE MEETING MINUTES FROM AUGUST 11, 1999	ADMIN RECORD INFO REPOSITORY	DDT GW MTBE MTG MINS PCE RAB SOIL TCE UST	1 17 7 BLDG. 651	SOUTHWEST DIVISION

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M60050 / 000350 NONE MM NONE 0200	04-13-2000 12-01-1999 NONE	VARIOUS NAVFAC - SOUTHWEST DIVISION	PUBLIC INFORMATION MATERIALS FROM THE DECEMBER 1, 1999 RESTORATION ADVISORY BOARD (RAB) MEETING (PORTIONS OF MAILING LIST ARE CONFIDENTIAL - RAB AGENDA & MEETING MINUTES FROM 9/29/99 CAN BE REFERENCED AT REF. #243)	ADMIN RECORD CONFIDENTIAL	APHO BCP BRAC BTEX DDT EOD FS IRP LUFT MTBE NFA OU PAH PCE PESTICIDES PIM QAPP RAB RI ROD SOIL SVE SVOC SWMU TCE TDS UST UXO VOC	1 11 12 14 16 17 18 2 24 3 5 7 8 APHO 10 APHO 28 APHO 30 APHO 35 APHO 37 APHO 41 APHO 8 APHO 9 BLDG. 296 BLDG. 297 BLDG. 368 BLDG. 47 OU 1 OU 2A OU 2B OU 2C OU 3 OU 3B SWMU 46 UST 278 UST 298A UST 298B	SOUTHWEST DIVISION

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						UST 380	
						UST 388B	
						UST 390	
						UST 391	
						UST 392E	
						UST 392F	
						UST 462	
						UST 473	
						UST 47A	
						UST 47B	
						UST 637	
						UST 651	
						UST 673	
						UST 800	
						UST 891A	
						UST 891B	
						UST 891C	
						UST 902A	
						UST 902B	
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M60050 / 000273 NONE LTR NONE 0006	03-15-2000 12-15-1999 NONE	NAVFAC - SOUTHWEST DIVISION D. GOULD RAB, COMMITTEE CHAIRMAN G HURLEY	RESPONSE TO RESTORATION ADVISORY BOARD (RAB) COMMITTEE CHAIRMAN COMMENTS DATED 11/2/99, TO THE BASE REALIGNMENT AND CLOSURE (BRAC) PLAN (REFERENCE AR #377 - COMMENTS BY TECHNICAL REVIEW COMMITTEE & AR #2392 BRAC CLEANUP PLAN)	ADMIN RECORD INFO REPOSITORY	APHO BCP COMMENTS HRA IRP RFA TRC UST	1 10 11 12 13 14 15 16 17 18 19 2 20 21 22 24 25 3 4 5 6 7 8 9	SOUTHWEST DIVISION
M60050 / 000265 SWDIV SER 06CC.KF/0780 LTR NONE 0020	03-09-2000 12-21-1999 NONE	NAVFAC - SOUTHWEST DIVISION D. SAKAMOTO DTSC, CYPRESS, CA J. SCANDURA	LAND USE COVENANT AGREEMENTS AND RECORDS OF DECISION (RODS) (WITH ENCLOSURES) - (RESPONSE TO 12/21/99 LETTER TO DTSC CAN BE REFERENCED AT REF. #349)	ADMIN RECORD INFO REPOSITORY	LANDFILL LUC ROD	17 2 3 5 OU 2-B OU 2-C OU 3	SOUTHWEST DIVISION

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M60050 / 000357 NONE MM NONE 0150	04-13-2000 01-26-2000 NONE	VARIOUS NAVFAC - SOUTHWEST DIVISION	PUBLIC INFORMATION MATERIALS FROM THE JANUARY 26, 2000 RESTORATION ADVISORY BOARD (RAB) MEETING (PORTIONS OF MAILING LIST ARE CONFIDENTIAL - RAB MEETING MINUTES AND AGENDA FROM 12/1/99 CAN BE REFERENCED AT REF. #312)	ADMIN RECORD CONFIDENTIAL	BRAC FFA GW HRA IRP IWTP MTBE OU PIM RAB ROD SVE SWMU TEPH TVPH UST VOC	1 12 17 2 BLDG. 296 OU 3 UST 47A UST 47B	SOUTHWEST DIVISION
M60050 / 000309 CTO-200/0044 PLAN N68711-92-D-4670 0009	04-06-2000 03-01-2000 00200	BECHTEL NATIONAL, INC. T. HEIRONIMUS NAVFAC - SOUTHWEST DIVISION	DRAFT PROPOSED PLAN FOR NO FURTHER ACTION (INCLUDES TRANSMITTAL LETTERS TO CRWQCB & US EPA) {SEE AR #446 & 493 - LETTER & DTSC COMMENTS}	ADMIN RECORD INFO REPOSITORY	NFA OU PAH SVOC TPH VOC	14 7 OU 3B	SOUTHWEST DIVISION
M60050 / 000446 SWDIV SER 06CC.DG/159 LTR NONE 0002	04-27-2000 03-08-2000 NONE	NAVFAC - SOUTHWEST DIVISION D. GOULD VARIOUS AGENCIES	DRAFT PROPOSED PLAN DATED MARCH 2000 SENT TO REGULATORS FOR REVIEW AND COMMENTS {SEE AR #309 & 493 - DRAFT PROPOSED PLAN & DTSC COMMENTS}	ADMIN RECORD INFO REPOSITORY	OU PROPOSED PLAN	14 7 OU 3B	SOUTHWEST DIVISION

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M60050 / 000493 NONE LTR NONE 0007	07-24-2000 05-16-2000 NONE	DTSC, CYPRESS, CA T. CHESNEY NAVFAC - SOUTHWEST DIVISION D. GOULD	COMMENTS ON THE DRAFT PROPOSED PLAN DATED MARCH 2000 (WITH ENCLOSURE - ADDITIONAL COMMENTS FROM KIMBERLY FOREMAN PUBLIC PARTICIPATION SPECIALIST) {SEE AR #309 & 446 - DRAFT PROPOSED PLAN & LETTER}	ADMIN RECORD INFO REPOSITORY	COMMENTS PROPOSED PLAN	14 7 OU 3B	SOUTHWEST DIVISION
M60050 / 000454 CTO-0200/0075 MM N68711-92-D-4670 0040	06-29-2000 05-31-2000 00200	BECHTEL NATIONAL INC. NAVFAC - SOUTHWEST DIVISION	RESTORATION ADVISORY BOARD (RAB) MEETING MAILER - RAB MEETING AGENDA AND PUBLIC NOTICE FOR 5/31/00 MEETING & RAB MEETING MINUTES AND ATTACHMENTS FROM THE 3/29/00 MEETING (INCLUDES MAILING LIST - PORTIONS OF WHICH SHOULD BE CONSIDERED CONFIDENTIAL)	ADMIN RECORD CONFIDENTIAL INFO REPOSITORY	BCP BRAC COMMENTS FFA FS GW HAZ WASTE HRA LF MTBE PAH RAB RCRA ROD SOIL SVE TCE UST WELLS	14 16 17 18 2 24 3 5 7 BLDG 295 BLDG 296 BLDG 297	SOUTHWEST DIVISION

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M60050 / 000479 CTO-200/0089 PLAN N68711-92-D-4670 0017	07-13-2000 07-01-2000 00200	BECHTEL NATIONAL INC. NAVFAC - SOUTHWEST DIVISION	DRAFT FINAL PROPOSED PLAN FOR OPERABLE UNIT (INCLUDES CONSOLIDATED RESPONSE TO COMMENTS ON DRAFT PROPOSED PLAN; COMMENTS FROM U S. EPA & DTSC)	ADMIN RECORD INFO REPOSITORY	ARSENIC CANCER COMMENTS COPC ERA GW HERBICIDE METALS NFA PAH PESTICIDES PUBNOT RI ROD SOIL SVOC TPH TRPH VOC	14 7 BLDG 245 BLDG 246 BLDG 296 BLDG 297 OU 3	SOUTHWEST DIVISION
M60050 / 000504 SWDIV SER 06CC.DG/542 LTR NONE 0006	08-08-2000 07-10-2000 NONE	NAVFAC - SOUTHWEST DIVISION D. GOULD VARIOUS AGENCIES	DELIVERY OF DRAFT FINAL PROPOSED PLAN AND RESPONSE TO COMMENTS (SEE AR #479 FOR THE DOCUMENTS)	ADMIN RECORD BASE INFO REPOSITORY	BCT BRAC IR RAB	14 7	SOUTHWEST DIVISION

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M60050 / 000498 CTO-0200/0095 MISC N68711-92-D-4670 0050	08-03-2000 07-19-2000 00200	BECHTEL NATIONAL, INC. T. HEIRONIMUS NAVFAC - SOUTHWEST DIVISION	RESTORATION ADVISORY BOARD (RAB) MEETING MAILER - RAB MEETING AGENDA & PUBLIC NOTICE FOR THE JULY 26, 2000 RAB MEETING. ALSO, INCLUDES RAB MEETING MINUTES & ATTACHMENTS FROM THE 5/31/00 MEETING. (MAILING LIST IS CONFIDENTIAL)	ADMIN RECORD CONFIDENTIAL INFO REPOSITORY	GW LANDFILL MTG MINS PCE RAB RI ROD TCA TCE UST VOC	1 12 16 17 18 2 24 3 5 BLDG. 1789 BLDG. 1803 BLDG. 307 BLDG. 787 OU 1 OU 2A OU 2B OU 3	SOUTHWEST DIVISION
M60050 / 000499 NONE LTR NONE 0002	08-07-2000 07-27-2000 NONE	DTSC - CYPRESS T. CHESHEY NAVFAC - SOUTHWEST DIVISION D. GOULD	DTSC REVIEW OF DRAFT FINAL PROPOSED PLAN FOR THE DROP TANK DRAINAGE AREA NO. 2 & THE BATTERY ACID DISPOSAL AREA DATED JULY 2000 WITH ASSOCIATED RESPONSE TO COMMENTS. DTSC CONCURS WITH THE RELEASE OF THE PROPOSED PLAN FOR PUBLIC COMMENT.	ADMIN RECORD	DISPOSAL IRP PROPOSED PLAN	14 7	SOUTHWEST DIVISION

(([qry_main_admin_record_select by uic] SUBJECT Like '*TECHNICAL REVIEW COMMITTEE*' Or [qry_main_admin_record_select by uic].SUBJECT Like '*TRC*' Or [qry_main_admin_record_select by uic].SUBJECT Like '*FACT SHEET*' Or [qry_main_admin_record_select by uic].SUBJECT Like '*PROPOSED PLAN*' Or [qry_main_admin_record_select by uic].SUBJECT Like '*RESTORATION ADVISORY BOARD*' Or [qry_main_admin_record_select by uic].SUBJECT Like '*RAB*' Or [qry_main_admin_record_select by uic].SUBJECT Like '*PUBLIC*' Or [qry_main_admin_record_select by uic].SUBJECT Like '*NEWS*' Or [qry_main_admin_record_select by uic].SUBJECT Like '*RECORD OF DECISION*' Or [qry_main_admin_record_select by uic].SUBJECT Like '*ROD*' Or [qry_main_admin_record_select by uic].SUBJECT Like '*RESPONSIVENESS SUMMARY*' Or [qry_main_admin_record_select by uic].SUBJECT Like '*LOCAL REUSE AUTHORITY*' Or [qry_main_admin_record_select by uic].SUBJECT Like '*LRA*' Or [qry_main_admin_record_select by uic].SUBJECT Like '*WORKSHOP*' Or [qry_main_admin_record_select by uic].SUBJECT Like '*NOTICE*' Or [qry_main_admin_record_select by uic].SUBJECT Like '*NEWSPAPER*' Or [qry_main_admin_record_select by uic].SUBJECT Like '*HEARING*' Or [qry_main_admin_record_select by uic].SUBJECT Like '*LOCAL REDEVELOPMENT AUTHORITY*'))AND UIC=M60050

No Keywords

Sites=00007;00014;14,7,OU 3,OU 3B

TECHNICAL DOCUMENTS

DRAFT ADMINISTRATIVE RECORD FILE INDEX - UPDATE (SORTED BY RECORD DATE/RECORD NUMBER)
MCAS El Toro
TECHNICAL DOCUMENTS FOR SITES 7/14 (OU 3 & OU 3B)

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M60050 / 000187 LTR NONE 0000	11-01-1993 09-11-1985 NONE 01.1	J. B. LEAP MCAS EL TORO COMMANDING OFFIC NAV PORT HUENEME	INITIAL ASSESSMENT STUDY OF MCAS EL TORO	ADMIN RECORD INFO REPOSITORY	NFA PA TECH/GUID DOC.	00001 00002 00003 00004 00005 00006 00007 00008 00009 00010 00011 00012 00013 00014 00015 00016 00017 00018 00019 00020 00021 00022 OU 1 OU 2 OU 2A OU 2B OU 2C OU 3	SOUTHWEST DIVISION NONE

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M60050 / 000999 GUID NONE 0050	10-06-1995 01-01-1986 NONE 11 1	EPA WASHINGTON D	DRAFT GUIDELINES FOR GROUNDWATER CLASSIFICATION UNDER THE EPA GROUNDWATER PROTECTION STRATEGY	ADMIN RECORD	EE/CA GUID GW TECH/GUID DOC	OU 3	SOUTHWEST DIVISION NONE
M60050 / 000793 LTR NONE 0018	07-07-1995 11-04-1986 NONE 01.2	EPA SAN FRANCISC J. JOHNSON MCAS EL TORO	REVIEW COMMENTS ON THE INITIAL ASSESSMENT STUDY	ADMIN RECORD	COMMENTS IAS NFA TECH/GUID DOC	OU 3	SOUTHWEST DIVISION NONE

UIC No. / Rec. No. Doc. Control No. Record Type Contr./Guid. No. Approx. # Pages	Prc. Date Record Date CTO No. EPA Cat. #	Author Affil. Author Recipient Affil. Recipient	Subject	Classification	Keywords	Sites	Location Box No.
M60050 / 001051 LTR NONE 0017	12-11-1995 05-13-1987 NONE 01.6	SCAQMD EL MONTE A. WILSON MCAS EL TORO B. VAN CLEEF	DEFINITION OF "FACILITY" FOR RULE 1107 FOR DISTRICT PURPOSES	ADMIN RECORD	TECH/GUID DOC.	00001 00002 00003 00004 00005 00006 00007 00008 00009 00010 00011 00012 00013 00014 00015 00016 00017 00018 00019 00020 00021 00022 00024 00025 OU 1 OU 2 OU 2A OU 2B OU 2C OU 3	PIERCE LEAHY 80462364
M60050 / 001808 LTR NONE 0002	03-21-1997 03-14-1988 NONE 01.6	ORANGE CO HEALTH L. GJETLEY SOUTHWEST E CERINI	VERIFICATION STEP PLAN OF ACTION FOR THE CONFIRMATION STUDY OF MCAS	ADMIN RECORD	COMMENTS TECH/GUID DOC.	00001 00005 00007	SOUTHWEST DIVISION NONE

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M60050 / 001836 LTR NONE 0003	03-24-1997 03-14-1988 NONE 01.6	COUNTY OF ORANGE L. GJETLEY SOUTHWEST DIVISION E. CERINI	COMMENTS ON THE VERIFICATION STEP PLAN OF ACTION FOR CONFIRMATION STUDY AND RESPONSE TO COMMENTS	ADMIN RECORD INFO REPOSITORY	COMMENTS GW SOIL	00001 00005 00007	SOUTHWEST DIVISION NONE
M60050 / 000788 PLAN N624785C5592000 0250	07-07-1995 08-01-1988 NONE 01.2	JMM J. GOODELL MCAS EL TORO	SITE INSPECTION PLAN OF ACTION IRP MCAS TUSTIN AND EL TORO	ADMIN RECORD	EE/CA NFA SI TECH/GUID DOC.	00001 00002 00003 00004 00005 00006 00007 00008 00009 00010 00011 00013 00014 00016 00017 00019 OU 2 OU 2A OU 2B OU 2C OU 3	SOUTHWEST DIVISION NONE
M60050 / 000988 GUID NONE 0011	10-04-1995 06-05-1989 NONE 11.1	EPA SAN FRANCISC H.L. LONGEST VARIOUS	LAND DISPOSAL RESTRICTIONS AS RELEVANT AND APPROPRITATE REQUIREMENTS FOR CERCLA CONTAMINATED SOIL& DEBRIS OSWER DIRECTIVE NO. 9347.2-01	ADMIN RECORD	EE/CA GUID	00004 00007 00011 00013 00014 00019 00020	PIERCE LEAHY 80462348

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M60050 / 000998 GUID NONE 0300	10-06-1995 08-01-1989 NONE 11.1	EPA WASHINGTON D	CERCLA COMPLIANCE WITH OTHER LAWS MANUAL: PART II CLEAN AIR ACT AND OTHER ENVIRONMENTAL STAUTES AND STATE REQUIREMENTS EPA 540/G-89/009 OSWER DIR 9234.102	ADMIN RECORD	CAA CERCLA EE/CA	00004 00007 00011 00013 00014 00019 00020	PIERCE LEAHY 80462348
M60050 / 000982 GUID NONE 0200	10-04-1995 10-01-1989 GUID 11.3	STATE OF CALIFOR	LEAKING UNDERGROUND FUEL TANK (LUFT) FIELD MANUAL. GUIDANCE FOR SITE ASSESSMENT, CLEANUP, AND UST CLOSURE	ADMIN RECORD	EE/CA LUFT	00004 00007 00011 00013 00014 00019 00020	SOUTHWEST DIVISION NONE
M60050 / 000009 RPT N6871189D929600 0200	10-29-1993 01-01-1990 00018 03.3	JACOBS ENGINEERING SOUTHWEST DIVISION	IMPLEMENTATION PLAN - WORK PLAN FOR A REMEDIAL INVESTIGATION/FEASIBILITY STUDY AT THE MCAS, EL TORO	ADMIN RECORD	FS NFA RI TECH/GUID DOC.	00001 00002 00003 00004 00005 00006 00007 00008 00009 00010 00011 00012 00013 00014 00015 00016 00017 00018 00019	SOUTHWEST DIVISION NONE

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M60050 / 000787 LTR NONE 0008	07-07-1995 01-11-1990 NONE 01 2	OCWD R L. HERNDON MCAS EL TORO M.W. REHOR	COMMENTS ON MCAS EL TORO OFF-STATION DRAFT RI WORK PLAN (NOVEMBER 1989)	ADMIN RECORD	COMMENTS NFA	OU 1 OU 2 OU 3	SOUTHWEST DIVISION NONE
M60050 / 000011 RPT N6871189D929600 0200	10-29-1993 02-01-1990 00018 03 3	JACOBS ENGINEERING SOUTHWEST DIVISION	REVISED IMPLEMENTATION PLAN - WORK PLAN FOR A REMEDIALINVESTIGATION/FEASIBILITY STUDY AT THE MCAS, EL TORO	ADMIN RECORD	FS RI TECH/GUID DOC	00001 00002 00003 00004 00005 00006 00007 00008 00009 00010 00011 00012 00013 00014 00015 00016 00017 00018 00019	SOUTHWEST DIVISION NONE
M60050 / 000013 RPT N6871185C559200 0200	10-29-1993 03-01-1990 NONE 03 3	JMM SOUTHWEST DIVISION	FINAL WORK PLAN OFF-SITE REMEDIAL INVESTIGATION MCAS EL TORO INSTALLATION RESTORATION PROGRAM MCAS TUSTIN &EL TORO	ADMIN RECORD	DCE NFA PCE RI TCE TECH/GUID DOC	OU 1 OU 2 OU 3	SOUTHWEST DIVISION NONE

UIC No. / Rec. No. Doc. Control No. Record Type Contr./Guid. No. Approx. # Pages	Prc. Date Record Date CTO No. EPA Cat. #	Author Affil. Author Recipient Affil. Recipient	Subject	Classification	Keywords	Sites	Location Box No.
M60050 / 000791 LTR NONE 0001	07-07-1995 03-31-1990 NONE 01.2	JMM SOUTHWEST DIVISION	JMM'S RESPONSE TO COMMENTS FROM OCWD	ADMIN RECORD	COMMENTS NFA	OU 1 OU 2 OU 3 OU 4	SOUTHWEST DIVISION NONE
M60050 / 000016 RPT N6871189D929600 0200	10-29-1993 04-09-1990 00018 03.3	JACOBS ENGINEERING SOUTHWEST DIVISION	DRAFT SUMMARY REPORT - COMPREHENSIVE WORK PLAN FOR REMEDIAL INVESTIGATION/FEASIBILITY STUDY	ADMIN RECORD	FS NFA RI TECH/GUID DOC.	00001 00002 00003 00004 00005 00006 00007 00008 00009 00010 00011 00012 00013 00014 00015 00016 00017 00018 00019 00020 00021 00022	SOUTHWEST DIVISION NONE

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UIC No. / Rec. No. Doc. Control No. Record Type Contr./Guid. No. Approx. # Pages	Prc. Date Record Date CTO No. EPA Cat. #	Author Affil. Author Recipient Affil. Recipient	Subject	Classification	Keywords	Sites	Location Box No.
M60050 / 000022 RPT N6871189D929600 0200	10-29-1993 09-10-1990 00018 03 5	JACOBS ENGINEERING SOUTHWEST DIVISION	DRAFT SITE HEALTH AND SAFETY PLAN - CTO #0018 COMPREHENSIVE WORK PLAN FOR REMEDIAL INVESTIGATION/ FEASIBILITY STUDY	ADMIN RECORD	FS RI TECH/GUID DOC.	00001 00002 00003 00004 00005 00006 00007 00008 00009 00010 00011 00012 00013 00014 00015 00016 00017 00018 00019 00020 00021 00022	SOUTHWEST DIVISION NONE

UIC No. / R... .o.							
Doc. Control No.	Prc. Date	Author Affil.					
Record Type	Record Date	Author					
Contr./Guid. No.	CTO No.	Recipient Affil.					Location
Approx. # Pages	EPA Cat. #	Recipient	Subject	Classification	Keywords	Sites	Box No.
M60050 / 000023	10-29-1993	JACOBS	DRAFT SITE SAMPLING AND ANALYSIS PLAN - CTO #0018 COMPREHENSIVE WORK PLAN FOR REMEDIAL INVESTIGATION/ FEASIBILITY STUDY	ADMIN RECORD	AAL	00001	SOUTHWEST DIVISION
	09-10-1990				FS	00002	
RPT	00018	SOUTHWEST DIVISION			NFA	00003	NONE
N6871189D929600	03.1				OU-3	00004	
0000					RI	00005	
					SAP	00006	
					TCE	00007	
					TECH/GUID DOC.	00008	
					VOC	00009	
						00010	
						00011	
						00012	
						00013	
						00014	
						00015	
						00016	
						00017	
						00018	
						00019	
						00020	
						00021	

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UIC No. / Rec. No. Doc. Control No. Record Type Contr./Guid. No. Approx. # Pages	Prc. Date Record Date CTO No. EPA Cat. #	Author Affil. Author Recipient Affil. Recipient	Subject	Classification	Keywords	Sites	Location Box No.
M60050 / 000024 RPT N6871189D929600 0000	10-29-1993 09-10-1990 00018 03 3	JACOBS SOUTHWEST DIVISION	DRAFT REMEDIAL INVESTIGATION FEASIBILITY STUDY WORK PLAN - CTO #0018	ADMIN RECORD	FS NFA PCB RI TECH/GUID DOC. VOC	00001 00002 00003 00004 00005 00006 00007 00008 00009 00010 00011 00012 00013 00014 00015 00016 00017 00018 00019 00020 00021 00022	SOUTHWEST DIVISION NONE
M60050 / 000995 MISC NONE 0100	10-06-1995 10-01-1990 NONE 01.6	EPA SAN FRANCISC MCB CAMP PENDLET	FEDERAL FACILITY AGREEMENT UNDER CERCLA SECTION 120 MCB CAMP PENDLETON ALSO USED IN SUPPORT OF THE MCAS EL TORO EE/CA FOR SITES 4,7,11,13,14,19 & 20	ADMIN RECORD	EE/CA FFA NFA TECH/GUID DOC.	00004 00007 00011 00013 00014 00019 00020	PIERCE LEAHY 80462348

UIC No. / Rec. No. Doc. Control No. Record Type Contr./Guid. No. Approx. # Pages	Prc. Date Record Date CTO No. EPA Cat. #	Author Affil. Author Recipient Affil. Recipient	Subject	Classification	Keywords	Sites	Location Box No.
M60050 / 000190 RPT NONE 0000	03-03-1994 11-01-1990 NONE 07.1	SOUTHWEST DIVISI ENVIRONMENTAL SOUTHWEST DIVISION FILE	MCAS EL TORO INSTALLATION RESTORATION PROGRAM STATUS REPORT SITE HISTORY	ADMIN RECORD	FS IRP NFA RI SI TCE TECH/GUID DOC.	00001 00002 00003 00004 00005 00006 00007 00008 00009 00010 00011 00012 00013 00014 00015 00016 00017 00018 00019 00020 00021 00022 00023 OU 1 OU 2 OU 3 OU 4	SOUTHWEST DIVISION NONE

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UIC No. / Rec. No. Doc. Control No. Record Type Contr./Guid. No. Approx. # Pages	Prc. Date Record Date CTO No. EPA Cat. #	Author Affil. Author Recipient Affil. Recipient	Subject	Classification	Keywords	Sites	Location Box No.
M60050 / 000029 RPT N6871189D929600 0000	10-29-1993 02-27-1991 00018 03.4	JACOBS ENGINEERING SOUTHWEST DIVISION	DRAFT FINAL SITE SAFETY AND HEALTH PLAN MCAS EL TORO	ADMIN RECORD	SSHP TECH/GUID DOC.	00001 00002 00003 00004 00005 00006 00007 00008 00009 00010 00011 00012 00013 00014 00015 00016 00017 00018 00019 00020 00021 00022	SOUTHWEST DIVISION NONE

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UIC No. / Rec. No. Doc. Control No. Record Type Contr./Guid. No. Approx. # Pages	Prc. Date Record Date CTO No. EPA Cat. #	Author Affil. Author Recipient Affil. Recipient	Subject	Classification	Keywords	Sites	Location Box No.
M60050 / 000672 PLAN N6871189D929600 0350	04-05-1995 02-28-1991 00018 03.3	JACOBS ENGINEERING E. ROGER SOUTHWEST DIVISION	DRAFT FINAL RI/FS WORK PLAN MCAS EL TORO	ADMIN RECORD	FS NFA RI TECH/GUID DOC.	00001 00002 00003 00004 00005 00006 00007 00008 00009 00010 00011 00012 00013 00014 00015 00016 00018 00019 00020 00021 00022 OU 1 OU 2 OU 3	SOUTHWEST DIVISION NONE

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UIC No. / Rec. No. Doc. Control No. Record Type Contr./Guid. No. Approx. # Pages	Prc. Date Record Date CTO No. EPA Cat. #	Author Affil. Author Recipient Affil. Recipient	Subject	Classification	Keywords	Sites	Location Box No.
M60050 / 000977 PLAN N6871189D929600 0950	08-30-1995 02-28-1991 00018 03 1	JACOBS ENGINEERING J. DOLEGOWSKI SOUTHWEST DIVISION	DRAFT FINAL SAMPLING AND ANALYSIS PLAN	ADMIN RECORD	NFA SAP TECH/GUID DOC.	00001 00002 00003 00004 00005 00006 00007 00008 00009 00010 00011 00012 00013 00014 00015 00016 00017 00018 00019 00020 00021 00022 OU 1 OU 2 OU 3	PIERCE LEAHY 80462347

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UIC No. / Rec. No. Doc. Control No. Record Type Contr./Guid. No. Approx. # Pages	Prc. Date Record Date CTO No. EPA Cat. #	Author Affil. Author Recipient Affil. Recipient	Subject	Classification	Keywords	Sites	Location Box No.
M60050 / 000892 MISC NONE 0006	07-19-1995 11-01-1991 NONE 10.6	SOUTHWEST DIVISI	FACT SHEET "DESCRIBING INVESTIGATION OF POSSIBLE HAZARDOUS WASTE CONTAMINATION"	ADMIN RECORD	HAZ WASTE PUB. PARTICIPAT	00001 00002 00003 00004 00005 00006 00007 00008 00009 00010 00011 00012 00013 00014 00015 00016 00017 00018 00019 00020 00021 00022	SOUTHWEST DIVISION NONE
M60050 / 000900 XMTL N6871189D929600 0032	07-19-1995 01-23-1992 00145 01.5	JACOBS ENGINEERING J. DOLEGOWSKI SOUTHWEST DIVISION A. PISZKIN	MEETING MINUTES WITH REGULATORY AGENCIES RI/FS PHASE I	ADMIN RECORD	MTG MINS TECH/GUID DOC.	OU 1 OU 2 OU 3	SOUTHWEST DIVISION NONE

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UIC No. / Rec. No. Doc. Control No. Record Type Contr./Guid. No. Approx. # Pages	Prc. Date Record Date CTO No. EPA Cat. #	Author Affil. Author Recipient Affil. Recipient	Subject	Classification	Keywords	Sites	Location Box No.
M60050 / 001019 LTR N6871189D929600 0010	12-08-1995 05-14-1992 00145 01.6	JACOBS ENGINEERING SOUTHWEST DIVISION	MEETING MINUTES WITH REGULATORY AGENCIES ON THE RI/FS PHASE I	ADMIN RECORD	MTG MINS TECH/GUID DOC.	00001 00002 00003 00004 00005 00006 00007 00008 00009 00010 00011 00012 00013 00014 00015 00016 00017 00018 00019 00020 00021 00022 OU 1 OU 2 OU 2A OU 2B OU 2C OU 3	PIERCE LEAHY 80462348

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UIC No. / Rec. No. Doc. Control No. Record Type Contr./Guid. No. Approx. # Pages	Prc. Date Record Date CTO No. EPA Cat. #	Author Affil. Author Recipient Affil. Recipient	Subject	Classification	Keywords	Sites	Location Box No.
M60050 / 001483 MISC NONE 0005	05-21-1996 12-10-1992 00145 03.0	JACOBS ENGINEERING C. FLAGG SOUTHWEST DIVISION A. PISZKIN	MEETING MINUTES FOR REMEDIAL PROJECT MANAGER'S MEETINGTO DISCUSS REMEDIAL INVESTIGATION/FEASIBILITY STUDY AND RCRA FACILITY ASSESSMENT	ADMIN RECORD	FS MTG MINS NFA RCRA RFA RI TECH/GUID DOC.	00001 00002 00003 00004 00005 00006 00007 00008 00009 00010 00011 00012 00013 00014 00015 00016 00017 00019 00020 00021 00022 00024 00025 OU 2 OU 3	PIERCE LEAHY 80462357
M60050 / 000976 MEMO N6871189D929600 0003	08-30-1995 01-01-1993 00145 01.1	CH2M HILL M. ARENDS SOUTHWEST DIVISION	RFA SITES REQUIRING EVALUATION DURING THE DQO PROCESS RI/FS PHASE I	ADMIN RECORD	DQOP TECH/GUID DOC.	00003 00006 00007 00008 00013 00015 00016 00020 00021	PIERCE LEAHY 80462347

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UIC No. / Rec. No. Doc. Control No. Record Type Contr./Guid. No. Approx. # Pages	Prc. Date Record Date CTO No. EPA Cat. #	Author Affil. Author Recipient Affil. Recipient	Subject	Classification	Keywords	Sites	Location Box No.
M60050 / 000913 XMTL N6871189D929600 0040	07-19-1995 **02-10-1993** 00145 11.5	JACOBS ENGINEERING C. ELLIOT SOUTHWEST DIVISION	RPM MEETING MINUTES RI/FS AND CTO 193 RCRA FACILITIESASSESSMENT	ADMIN RECORD	MTG MINS TECH/GUID DOC.	00002 00017 OU 1 OU 2 OU 3	PIERCE LEAHY 80462346
M60050 / 000824 MEMO N6871189D929600 0018	07-07-1995 **02-15-1993** 00145 01.6	JACOBS ENGINEERING J. DOLEGOWSKI SOUTHWEST DIVISION A. PISZKIN	DRAFT POSITION PAPER ON THE PRELIMINARY RISK ASSESSMENT FOR OU 1, 2, 3 AND THE PROPOSED EL TORO BASELINE HUMAN HEALTH RISK ASSESSMENT FOR OU 1	ADMIN RECORD	NFA RA TECH/GUID DOC.	OU 1 OU 2 OU 3	PIERCE LEAHY 80462345
M60050 / 000125 LTR NONE 0000	11-01-1993 **02-26-1993** NONE 08 1	DTSC G. HOLMES SOUTHWEST DIVISION A. PISZKIN	DRAFT POSITION PAPER ON THE PRELIMINARY RISK ASSESS. FOR OPERABLE UNITS (OUS)-1, 2 AND 3 AND THE PROPOSED EL TORO BASELINE HUMAN HEALTH RISK ASSESS. FOR OU-1	ADMIN RECORD	NFA OU RISK TECH/GUID DOC.	OU 1 OU 2 OU 3	SOUTHWEST DIVISION NONE

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UIC No. / Rec. No. Doc. Control No. Record Type Contr./Guid. No. Approx. # Pages	Prc. Date Record Date CTO No. EPA Cat. #	Author Affil. Author Recipient Affil. Recipient	Subject	Classification	Keywords	Sites	Location Box No.
M60050 / 001024 LTR N6871189D929600 0067	12-08-1995 03-12-1993 00145 01.6	JACOBS ENGINEERING SOUTHWEST DIVISION	REMEDIAL PROJECT MANAGER MEETING MINUTES WITH REGULATORY AGENCIES ON THE RI/FS	ADMIN RECORD	DQOP MTG MINS TECH/GUID DOC.	00001 00002 00003 00004 00005 00006 00007 00008 00009 00010 00011 00012 00013 00014 00015 00016 00017 00018 00020 00021 00022 OU 1 OU 2 OU 2A OU 2B OU 2C OU 3	PIERCE LEAHY 80462348
M60050 / 000821 MEMO N6871189D929600 0020	07-07-1995 04-30-1993 00145 01.6	JACOBS ENGINEERING SOUTHWEST DIVISION	RISK ASSESSMENT MEETING HELD ON 30 APRIL 1993	ADMIN RECORD	NFA RA TECH/GUID DOC.	OU 1 OU 2 OU 3	PIERCE LEAHY 80462345

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M60050 / 001174 LTR NONE 0020	12-26-1995 04-30-1993 NONE 01.1	JACOBS ENGINEERING SOUTHWEST DIVISION	APRIL 30, 1993 RISK ASSESSMENT MEETING CONDUCTED FOR OU1, OU2 & OU3	ADMIN RECORD	MTG MINS NFA RA TECH/GUID DOC.	OU 1 OU 2 OU 3	PIERCE LEAHY 80462350
M60050 / 001005 GUID NONE 0200	10-06-1995 05-01-1993 NONE 11.3		A COMPILATION OF WATER QUALITY GOALS	ADMIN RECORD	EE/CA(*)	00004 00007 00011 00013 00014 00019 00020	SOUTHWEST DIVISION NONE

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M60050 / 000083 CLE-C01-01F145-B18-0001 RPT N68711-89-D-9296 0814	11-01-1993 05-07-1993 00145 01.1	JACOBS ENGINEERING SOUTHWEST DIVISION	INSTALLATION RESTORATION PROGRAM (IRP) PHASE I REMEDIAL INVESTIGATION (RI) DRAFT TECHNICAL MEMORANDUM - VOLUME I (SEE AR #84, #85, #86)	ADMIN RECORD	EE/CA IRP NFA RI TECH MEMO WELLS	1 10 11 12 13 14 15 16 17 18 19 2 20 21 22 3 4 5 6 7 8 9 OU 1 OU 2 OU 3	SOUTHWEST DIVISION NONE

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UIC No. / Rec. No. Doc. Control No. Record Type Contr./Guid. No. Approx. # Pages	Prc. Date Record Date CTO No. EPA Cat. #	Author Affil. Author Recipient Affil. Recipient	Subject	Classification	Keywords	Sites	Location Box No.
M60050 / 000084 CLE-C01-01F145-B18-0001 RPT N68711-89-D-9296 0822	11-01-1993 05-07-1993 00145 01 1	JACOBS ENGINEERING SOUTHWEST DIVISION	INSTALLATION RESTORATION PROGRAM (IRP) PHASE I REMEDIAL INVESTIGATION (RI) DRAFT TECHNICAL MEMORANDUM - VOLUME II (SEE AR #83, #85, #86)	ADMIN RECORD	EE/CA IRP NFA RI TECH MEMO WELLS	00001 00002 00003 00004 00005 00006 00007 00008 00009 00010 00011 00012 00013 00014 00015 00016 00017 00018 00019 00020 00021 00022 OU 1 OU 2 OU 3	SOUTHWEST DIVISION NONE

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UIC No. / Rec. No. Doc. Control No. Record Type Contr./Guid. No. Approx. # Pages	Prc. Date Record Date CTO No. EPA Cat. #	Author Affil. Author Recipient Affil. Recipient	Subject	Classification	Keywords	Sites	Location Box No.
M60050 / 000085 CLE-C01-01F145-B18-0001 RPT N68711-89-D-9296 1019	11-01-1993 05-07-1993 00145 01.1	JACOBS ENGINEERING SOUTHWEST DIVISION	INSTALLATION RESTORATION PROGRAM (IRP) PHASE I REMEDIAL INVESTIGATION (RI) DRAFT TECHNICAL MEMORANDUM - VOLUME III (SEE AR #83, #84, #86)	ADMIN RECORD	EE/CA IRP MONITORING NFA RI TECH MEMO WELLS	00001 00002 00003 00004 00005 00006 00007 00008 00009 00010 00011 00012 00013 00014 00015 00016 00017 00018 00019 00020 00021 00022 OU 1 OU 2 OU 3	SOUTHWEST DIVISION NONE

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M60050 / 000086 CLE-C01-01F145-B18-0001 RPT N68711-89-D-9296 1302	11-01-1993 05-07-1993 00145 01 1	JACOBS ENGINEERING SOUTHWEST DIVISION	INSTALLATION RESTORATION PROGRAM (IRP) PHASE I REMEDIAL INVESTIGATION (RI) DRAFT TECHNICAL MEMORANDUM - VOLUME IV (SEE AR #83, #84, #85)	ADMIN RECORD	EE/CA IRP NFA RI TECH MEMO WELLS	1 10 11 12 13 14 15 16 17 18 19 2 20 21 22 3 4 5 6 7 8 9 OU 1 OU 2 OU 3	SOUTHWEST DIVISION NONE

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Doc. Control No.	Prc. Date	Author Affil.					
Record Type	Record Date	Author					
Contr./Guid. No.	CTO No.	Recipient Affil.					Location
Approx. # Pages	EPA Cat. #	Recipient	Subject	Classification	Keywords	Sites	Box No.
M60050 / 000132	11-01-1993	A. PISZKIN	IDENTIFICATION OF STATE "APPLICABLE" OR "RELEVANT AND APPROPRIATE" REQUIREMENTS (ARARS) FOR THE REMEDIAL INVESTIGATION AND FEASIBILITY STUDY MCAS EL TORO	ADMIN RECORD	ARAR	00001	SOUTHWEST DIVISION
	05-13-1993	SOUTHWESTDIV			EE/CA	00002	
LTR	NONE	J. J. ZARNOCH			FS	00003	NONE
NONE	04.1	EPA			NFA	00004	
0000					RI	00005	
					TECH/GUID DOC.	00006	
						00007	
						00008	
						00009	
						00010	
						00011	
						00012	
						00013	
						00014	
						00015	
						00016	
						00017	
						00018	
						00019	
						00020	
						00021	
						00022	
						00024	
						00025	
						00026	
						00027	
						OU 1	
						OU 2	
						OU 3	

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UIC No. / Rec. Doc. Control No. Record Type Contr./Guid. No. Approx. # Pages	Prc. Date Record Date CTO No. EPA Cat. #	Author Affil. Author Recipient Affil. Recipient	Subject	Classification	Keywords	Sites	Location Box No.
M60050 / 000901 LTR N6871189D929600 0002	07-19-1995 06-10-1993 00145 11.5	CRWQCB SANTA ANA J. BRODERICK SOUTHWEST DIVISION A. PISZKIN	SOIL CLEANUP LEVELS	ADMIN RECORD	EE/CA	00004 00007 00011 00013 00014 00019 00020	SOUTHWEST DIVISION NONE
M60050 / 001571 LTR NONE 0006	07-11-1996 06-23-1993 NONE 10.1	DTSC REGION IV J. JIMENEZ MCAS EL TORO J. JOYCE	DTSC COMMENTS ON REVISED FIELD SAMPLING PLAN PHASE II REMEDIAL INVESTIGATION/FEASIBILITY STUDY (RI/FS)	ADMIN RECORD	COMMENTS FS RI TECH/GUID DOC.	00001 00002 00003 00004 00005 00006 00007 00008 00009 00010 00011 00012 00013 00014 00015 00016 00017 00019 00020 00021 00022 00024 00025 OU 2 OU 3	PIERCE LEAHY 80462365

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M60050 / 000992 LTR NONE 0004	10-06-1995 **06-28-1993** NONE 01.6	DTSC SACRAMENTO J.P. CHRISTOPHER SOUTHWEST DIVISION J. PAWLISCH	USE OF CALIFORNIA CANCER POTENCY FACTORS FOR MCB CAMP PENDLETON ALSO USED IN SUPPORT OF THE MCAS EL TORO EE/CA FOR SITES 4,7,11,13,14,19 & 20	ADMIN RECORD	CANCER EE/CA	00004 00007 00011 00013 00014 00019 00020	PIERCE LEAHY 80462348
M60050 / 000142 LTR NONE 0000	11-01-1993 **07-26-1993** NONE 01.1	J. PAWLISCH SOUTHWESTDIV J. HAMILL EPA	SCHEDULE EXTENSION REQUEST FOR THE MCAS EL TORO DRAFT PHASE II WORK PLAN FOR OPERABLE UNITS (OUS) 2 AND 3	ADMIN RECORD	OU	OU 2 OU 3	SOUTHWEST DIVISION NONE
M60050 / 000989 GUID NONE 0090	10-04-1995 **08-01-1993** NONE 11.2	EPA SAN FRANCISC DISTRIBUTION	GUIDANCE ON CONDUCTING NON-TIME-CRITICAL REMOVAL ACTION UNDER CERCLA EPA/540-R-93-057 OSWER DIRECTIVE 9360.0-32 OFFICE OF REMEDIAL RESPONSE	ADMIN RECORD	EE/CA GUID	00004 00007 00011 00013 00014 00019 00020	SOUTHWEST DIVISION NONE
M60050 / 000116 LTR NONE 0000	11-01-1993 **08-04-1993** NONE 01.6	EPA J. HAMILL SOUTHWEST DIVISION A. PISZKIN	SCHEDULE EXTENSION REQUEST DRAFT PHASE II WORK PLAN FOR OPERABLE UNITS 2 AND 3	ADMIN RECORD	FFA TECH/GUID DOC.	OU 2 OU 3	SOUTHWEST DIVISION NONE

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M60050 / 001531 MEMO NONE 0003	07-10-1993 08-23-1993 NONE 10 1	OFF OF SCI AFF J CHRISTOPHER DTSC REGION IV J ZARNOCH	STATE OF CALIFORNIA, OFFICE OF SCIENTIFIC AFFAIRS COMMENTS ON POSITION PAPERS RELATED TO DATA QUALITY OBJECTIVES FOR THE PHASE II RI/FS	ADMIN RECORD	COMMENTS DQO NFA RI TECH/GUID DOC	00001 00002 00003 00004 00005 00006 00007 00008 00009 00010 00011 00012 00013 00014 00015 00016 00017 00019 00020 00021 00022 00024 00025 OU 2 OU 3	PIERCE LEAHY 80462364
M60050 / 001164 LTR NONE 0014	12-26-1995 08-26-1993 NONE 01 1	EPA SAN FRANCISC J HAMILL SOUTHWEST DIVISION A PISZKIN	COMMENTS ON POSITION PAPERS OF AUGUEST 6, 11, & 12, 1993 FOR DRAFT PHASE II WORK PLAN FOR OUS 2 & 3	ADMIN RECORD	COMMENTS NFA TECH/GUID DOC	OU 2 OU 3	PIERCE LEAHY 80462350

UIC No. / Rec. No. Doc. Control No. Record Type Contr./Guid. No. Approx. # Pages	Prc. Date Record Date CTO No. EPA Cat. #	Author Affil. Author Recipient Affil. Recipient	Subject	Classification	Keywords	Sites	Location Box No.
M60050 / 001155 LTR NONE 0005	12-26-1995 08-27-1993 NONE 01.1	DTSC LONG BEACH J. SCANDURA SOUTHWEST DIVISION A. PISZKIN	CONCURRENCE WITH NAVY'S SCHEDULE EXTENSION REQUEST OF JULY 26, 1993, COMMENTS ON GROUNDWATER SAMPLING PROCEDURES	ADMIN RECORD	COMMENTS GW	OU 1 OU 2 OU 3	PIERCE LEAHY 80462349
M60050 / 000994 LTR NONE 0006	10-06-1995 09-24-1993 NONE 01.6	SOUTHWEST DIVISI J.R. PAWLISCH DTSC LONG BEACH J.E. SCANDURA	USE OF CALIFORNIA CANCER POTENCY FACTORS FOR MCB CAMP PENDLETON ALSO USED IN SUPPORT OF THE MCAS EL TORO EE/CA FOR SITES 4,7,11,13,14,19 & 20	ADMIN RECORD	CANCER EE/CA	00004 00007 00011 00013 00014 00019 00020	PIERCE LEAHY 80462348

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UIC No. / Rec. Doc. Control No. Record Type Contr./Guid. No. Approx. # Pages	Prc. Date Record Date CTO No. EPA Cat. #	Author Affil. Author Recipient Affil. Recipient	Subject	Classification	Keywords	Sites	Location Box No.
M60050 / 000690 PLAN N6871189D929600 0100	04-05-1995 11-09-1993 00145 04.2	JACOBS ENGINEERING M BITNER SOUTHWEST DIVISION	PHASE II RI/FS DRAFT QUALITY ASSURANCE PROJECT PLAN IRP	ADMIN RECORD	FS QA RI TECH/GUID DOC.	00001 00002 00003 00004 00005 00006 00007 00008 00009 00010 00011 00012 00013 00014 00015 00016 00017 00018 00019 00020 00021 00022 00024 00025 OU 1 OU 2 OU 2A OU 2B OU 2C OU 3	SOUTHWEST DIVISION NONE

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UIC No. / Rec. No. Doc. Control No. Record Type Contr./Guid. No. Approx. # Pages	Prc. Date Record Date CTO No. EPA Cat. #	Author Affil. Author Recipient Affil. Recipient	Subject	Classification	Keywords	Sites	Location Box No.
M60050 / 000955 PLAN N6871189D929600 0250	08-18-1995 11-09-1993 00145 03.5	JACOBS ENGINEERING J. DOLEGOWSKI SOUTHWEST DIVISION	PHASE II RI/FS DRAFT HEALTH AND SAFETY PLAN (H&SP)	ADMIN RECORD	H&SP TECH/GUID DOC.	00001 00002 00003 00004 00006 00007 00008 00009 00010 00011 00012 00013 00014 00015 00016 00017 00019 00020 00021 00022 00024 00025	PIERCE LEAHY 80462347

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UIC No. / Rec. No. Doc. Control No. Record Type Contr./Guid. No. Approx. # Pages	Prc. Date Record Date CTO No. EPA Cat. #	Author Affil. Author Recipient Affil. Recipient	Subject	Classification	Keywords	Sites	Location Box No.
M60050 / 001074 PLAN N6871189D929600 0550	12-14-1995 11-09-1993 00145 04.2	JACOBS ENGINEERING M. BITNER SOUTHWEST DIVISION	PHASE II RI/FS DRAFT QUALITY ASSURANCE PROJECT PLAN DRAFT WORK PLAN (VOLUME II) APPENDIX A DQO SITES 1 THROUGH 11	ADMIN RECORD	DQOP NFA TECH/GUID DOC.	00001 00002 00003 00004 00005 00006 00007 00008 00009 00010 00011 OU 2 OU 2B OU 2C OU 3	PIERCE LEAHY 80462364

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M60050 / 000890 MISC NONE 0008	07-19-1995 12-01-1993 NONE 10.6	SOUTHWEST DIVISI	FACT SHEET "UPDATE OF THE ENVIRONMENTAL INVESTIGATIONS AT MCAS EL TORO"	ADMIN RECORD	PUB. PARTICIPAT PUBNOT	00001 00002 00003 00004 00005 00006 00007 00008 00009 00010 00011 00012 00013 00014 00015 00016 00017 00019 00020 00021 00022	SOUTHWEST DIVISION NONE

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UIC No. / Rec. No. Doc. Control No. Record Type Contr./Guid. No. Approx. # Pages	Prc. Date Record Date CTO No. EPA Cat. #	Author Affil. Author Recipient Affil. Recipient	Subject	Classification	Keywords	Sites	Location Box No.
M60050 / 001487 LTR NONE 0022	05-21-1996 12-07-1993 NONE 10.1	USE EPA REGION I J HAMILL SOUTHWEST DIVISION A. PISZKIN	US EPA LETTER REQUESTING 30 DAY EXTENSION ON REVIEW PERIOD FOR THE DRAFT PHASE II RI/FS WORK PLAN; US EPA COMMENTS DATED 12/17/93 INCLUDED	ADMIN RECORD	COMMENTS FS RI	00001 00002 00003 00004 00005 00006 00007 00008 00009 00010 00011 00012 00013 00014 00015 00016 00017 00019 00020 00021 00022 00024 00025 OU 2 OU 3	PIERCE LEAHY 80462357

UIC No. / Rec. No. Doc. Control No. Record Type Contr./Guid No. Approx. # Pages	Prc. Date Record Date CTO No. EPA Cat. #	Author Affil. Author Recipient Affil. Recipient	Subject	Classification	Keywords	Sites	Location Box No.
M60050 / 001534 LTR NONE 0023	07-10-1993 12-17-1993 NONE 10 1	US EPA REGION IX J. HAMILL SOUTHWEST DIVISION A. PISZKIN	US ENVIRONMENTAL PROTECTION AGENCY'S COMMENTS ON MCAS EL TORO INSTALLATION RESTORATION PROGRAM PHASE II RI/FS STUDY DRAFT WORK PLAN	ADMIN RECORD	COMMENTS FS NFA RI TECH/GUID DOC.	00001 00002 00003 00004 00005 00006 00007 00008 00009 00010 00011 00012 00013 00014 00015 00016 00017 00019 00020 00021 00022 00024 00025 OU 2 OU 3	PIERCE LEAHY 80462364

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UIC No. / Rec. No Doc. Control No. Record Type Contr /Guid. No. Approx. # Pages	Prc. Date Record Date CTO No. EPA Cat. #	Author Affil. Author Recipient Affil. Recipient	Subject	Classification	Keywords	Sites	Location Box No.
M60050 / 001308	03-14-1996	DTSC REGION IV	DTSC'S REVIEW COMMENTS ON THE DRAFT DATA MANAGEMENT PLAN PORTION OF THE PHASE II REMEDIAL INVESTIGATION WORK PLAN	ADMIN RECORD	COMMENTS	00001	PIERCE LEAHY
	01-20-1994	J JIMENEZ			DMP	00002	80462353
LTR	00059	MCAS EL TORO			FS	00003	
NONE	03 6	W LEE			RI	00004	
0004					TECH/GUID DOC	00005	
						00006	
						00007	
						00008	
						00009	
						00010	
						00011	
						00012	
						00013	
						00014	
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						00020	
						00021	
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						00024	
						00025	

UIC No. / Rec. No. Doc. Control No. Record Type Contr./Guid. No. Approx. # Pages	Prc. Date Record Date CTO No. EPA Cat. #	Author Affil. Author Recipient Affil. Recipient	Subject	Classification	Keywords	Sites	Location Box No.
M60050 / 000827	07-10-1995	JACOBS ENGINEERING	REMEDIAL PROJECT MANAGERS MEETING RI/FS	ADMIN RECORD	MTG MINS	00001	PIERCE LEAHY
	02-03-1994				TECH/GUID DOC.	00002	80462345
XMTL	00145	R. GREEN				00003	
N6871189D929600	11.5	SOUTHWEST DIVISION				00004	
0010						00005	
						00006	
						00007	
						00008	
						00009	
						00010	
						00011	
						00012	
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						00019	
						00020	
						00021	
						00022	
						00024	
						00025	
						OU 1	
						OU 2	
						OU 2A	
						OU 2B	
						OU 2C	
						OU 3	

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UIC No. / Rec. No. Doc. Control No. Record Type Contr./Guid. No. Approx. # Pages	Prc. Date Record Date CTO No. EPA Cat. #	Author Affil. Author Recipient Affil. Recipient	Subject	Classification	Keywords	Sites	Location Box No.
M60050 / 001535	07-10-1993 02-03-1994	DTSC REGION IV	MEETING MINUTES FROM REMEDIAL PROJECT MANAGERS' MEETING HELD TO DISCUSS: POTENTIAL REMOVAL ACTIONS ANDFIELD SCREENING AT RI/FS SITES; AND NON RI/FS SITES	ADMIN RECORD	FS MTG MINS RA RI	00001 00002 00003 00004 00005 00006 00007 00008 00009 00010 00011 00012 00013 00014 00015 00016 00017 00019 00020 00021 00022 00024 00025 OU 2 OU 3	PIERCE LEAHY 80462364
MM NONE 0010	NONE 03.0	VARIOUS AGENCIES					

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UIC No. / Rec. No. Doc. Control No. Record Type Contr./Guid. No. Approx. # Pages	Prc. Date Record Date CTO No. EPA Cat. #	Author Affil. Author Recipient Affil. Recipient	Subject	Classification	Keywords	Sites	Location Box No.
M60050 / 001029 LTR NONE 0005	12-08-1995 02-08-1994 NONE 01.6	DTSC LONG BEACH SOUTHWEST DIVISION	RPM MEETING ON THE POTENTIAL REMOVALS AT RI/FS SITES	ADMIN RECORD	MTG MINS REMOVAL	00003 00004 00005 00007 00008 00011 00013 00014 00017 00019 00020 00022 00025 OU 2 OU 2A OU 2B OU 2C OU 3	PIERCE LEAHY 80462348
M60050 / 001030 LTR NONE 0005	12-08-1995 02-08-1994 NONE 01.6	DTSC LONG BEACH SOUTHWEST DIVISION	RPM MEETING ON FIELD SCREENING AT RI/FS STRATA - POTENTIAL CHANGES TO STRATEGIES PROPOSED IN THE DRAFT PHASE II RI WORK PLAN	ADMIN RECORD	MTG MINS TECH/GUID DOC.	00002 00003 00004 00006 00007 00008 00009 00010 00012 00013 00019 00020 00022 OU 2 OU 3	PIERCE LEAHY 80462348

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UIC No. / Rec. No. Doc. Control No. Record Type Contr./Guid. No. Approx. # Pages	Prc. Date Record Date CTO No. EPA Cat. #	Author Affil. Author Recipient Affil. Recipient	Subject	Classification	Keywords	Sites	Location Box No.
M60050 / 001031 MM N6871189D929600 0024	12-08-1995 **03-21-1994** 00145 01.6	JACOBS ENGINEERING J. DOLEGOWSKI SOUTHWEST DIVISION R. GREEN	REMEDIAL PROJECT MANAGERS MEETING RI/FS WITH REGULATORY AGENCIES (CAL-EPA,SRWQCB,DTSC,OCWD)	ADMIN RECORD	MTG MINS TECH/GUID DOC.	00001 00002 00003 00004 00007 00012 00016 00018 00024 OU 1 OU 2 OU 2A OU 3	PIERCE LEAHY 80462348
M60050 / 000752 LTR NONE 0038	06-15-1995 **03-25-1994** NONE 03.4	MCAS EL TORO W.D. LEE EPA SAN FRANCISI J HAMILL	SOIL STOCKPILE CHARACTERIZATION SALME RESULTS SOIL REMOVED FROM STRATUM SITE 3 AND BACKFILL AT EXCAVATED AREA OF SITE 19	ADMIN RECORD	EE/CA REMOVAL	00003 00004 00007 00011 00013 00014 00019 00020	SOUTHWEST DIVISION NONE
M60050 / 000993 LTR NONE 0006	10-06-1995 **03-31-1994** NONE 01.6	DTSC LONG BEACH J.E. SCANDURA SOUTHWEST DIVISION J. PAWLISCH	USE OF CALIFORNIA CANCER POTENCY FACTORS FOR MCB CAMP PENDLETON ALSO USED IN SUPPORT OF THE MCAS EL TORO EE/CA FOR SITES 4,7,11,13,14,19 & 20	ADMIN RECORD	CANCER EE/CA	00004 00007 00011 00013 00014 00019 00020	PIERCE LEAHY 80462348

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M60050 / 000708 PLAN N6871189D929600 0200	04-05-1995 04-22-1994 00145 08.0	JACOBS ENGINEERING D.R. SMITH SOUTHWEST DIVISION	DRAFT FINAL HEALTH AND SAFETY PLAN RI/FS PHASE II MCAS EL TORO (REF. DOC# 001032)	ADMIN RECORD	H&SP TECH/GUID DOC.	00001 00002 00003 00004 00005 00006 00007 00008 00009 00010 00011 00012 00013 00014 00015 00016 00017 00019 00020 00021 00022 00024 00025	SOUTHWEST DIVISION NONE
M60050 / 000906 XMTL N6871189D929600 0002	07-19-1995 06-08-1994 00145 11.5	JACOBS ENGINEERING SOUTHWEST DIVISION	RI/FS GROUNDWATER MONITORING MEETING	ADMIN RECORD	MONITORING	00001 00008 00012 00013 00014 00015 00016	PIERCE LEAHY 80462346

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M60050 / 000979 GUID NONE 0020	10-03-1995 07-06-1994 NONE 11.6	SOUTHWEST DIVISI	ENGINEERING EVALUATION/COST ANALYSIS (EE/CA) OUTLINE FOR NON-TIME-CRITICAL REMOVAL ACTION	ADMIN RECORD	EE/CA EE/CA(*) NFA RA	00004 00007 00011 00013 00014 00019 00020	PIERCE LEAHY 80462348
M60050 / 001289 MISC NONE 0030	03-13-1996 08-19-1994 00059 03.6	BECHTEL NATIONAL T. LATAS BECHTEL NATIONAL D. COWSER	MEETING MINUTES AND MEETING PRESENTATION MATERIALS FORTHE PROGRESS MEETING OF THE PHASE II RI/FS WORKPLANS	ADMIN RECORD	FS MTG MINS RI TECH/GUID DOC.	00001 00002 00003 00004 00005 00006 00007 00008 00009 00010 00011 00012 00013 00014 00015 00016 00017 00019 00020 00021 00022 00024 00025 OU 2 OU 3	PIERCE LEAHY 80462352

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M60050 / 001541 MEMO NONE 0022	07-10-1996 08-19-1994 00059 03.0	KLEINFELDER T. LATAS BECHTEL NATIONAL D. COWSER	MEETING MINUTES FROM THE PROGRESS MEETING TO DISCUSS OVERALL APPROACH AND SAMPLING STRATEGIES FOR THE RI/FSWORK PLANS FOR OU-2, OU-3, AND VOC SOURCE AREA (24,25)	ADMIN RECORD	FS MTG MINS NFA OU RI TECH/GUID DOC. VOC	00001 00002 00003 00004 00005 00006 00007 00008 00009 00010 00011 00012 00013 00014 00015 00016 00017 00019 00020 00021 00022 00024 00025 OU 2 OU 3	PIERCE LEAHY 80462365

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UIC No. / Rec. No. Doc. Control No. Record Type Contr./Guid. No. Approx. # Pages	Prc. Date Record Date CTO No. EPA Cat. #	Author Affil. Author Recipient Affil. Recipient	Subject	Classification	Keywords	Sites	Location Box No.
M60050 / 001191	01-22-1996	JACOBS ENGINEERING	GROUNDWATER QUALITY DATA REPORT IRP RI/FS	ADMIN RECORD	DATA	00001	PIERCE LEAHY
	09-30-1994				GW	00002	80462350
DATA	00145				NFA	00003	
N6871189D929600	01.1	SOUTHWEST DIVISION			RI	00004	
1200					TECH/GUID DOC.	00005	
						00006	
						00007	
						00008	
						00009	
						00010	
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						OU 1	
						OU 2	
						OU 2A	
						OU 2B	
						OU 2C	
						OU 3	

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M60050 / 001291 MISC NONE 0030	03-13-1996 10-12-1994 00059 03.6	BECHTEL NATIONAL T. LATAS BECHTEL NATIONAL D. COWSER	MEETING MINUTES FOR THE 12-13 OCTOBER PROGRESS MEETINGPHASE II RI/FS WORKPLANS DISCUSSED APPROACHES FOR RI/FS ACTIVITIES, FIELD SAMPLING PLAN AND QAPP,	ADMIN RECORD	FS MTG MINS NFA RI TECH/GUID DOC.	00001 00002 00003 00004 00005 00006 00007 00008 00009 00010 00011 00012 00013 00014 00015 00016 00017 00019 00020 00021 00022 00024 00025	PIERCE LEAHY 80462352

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M60050 / 001277	03-13-1996	BECHTEL NATIONAL	PROGRESS MEETING MINUTES FOR PHASE II REMEDIAL INVESTIGATION/FEASIBILITY STUDY WORK PLAN	ADMIN RECORD	FS	00001	PIERCE LEAHY 80462352
	10-24-1994				MTG MINS	00002	
MISC	00059				NFA	00003	
NONE	03.6	SOUTHWEST DIVISION			RI	00004	
0011					TECH/GUID DOC.	00005	
						00006	
						00007	
						00008	
						00009	
						00010	
						00011	
						00012	
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						00014	
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						00024	
						00025	

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UIC No. / Rec. No. Doc. Control No. Record Type Contr./Guid. No. Approx. # Pages	Prc. Date Record Date CTO No. EPA Cat. #	Author Affil. Author Recipient Affil. Recipient	Subject	Classification	Keywords	Sites	Location Box No.
M60050 / 001290 MISC NONE 0030	03-13-1996 10-28-1994 00059 03.6	BECHTEL NATIONAL T. LATAS BECHTEL NATIONAL D. COWSER	MEETING MINUTES AND MEETING PRESENTATION MATERIALS FORTHE PROGRESS MEETING TO DISCUSS APPROACHES AND SAMPLING ACTIVITIES, MEETING HELD 28 OCTOBER 1994	ADMIN RECORD	FS MTG MINS RI TECH/GUID DOC.	00001 00002 00003 00004 00005 00006 00007 00008 00009 00010 00011 00012 00013 00014 00015 00016 00017 00019 00020 00021 00022 00024 00025	PIERCE LEAHY 80462352

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M60050 / 001264 RPT N6871192D467000 0023	02-09-1996 11-05-1994 00059 03.3	BECHTEL NATIONAL J. KLEUSENER SOUTHWEST DIVISION J. ASHMAN	SUBMITTAL OF DRAFT DATA MANAGEMENT PLAN FOR PHASE II RI/FS	ADMIN RECORD	DMP FS RI TECH/GUID DOC.	00001 00002 00003 00004 00005 00006 00007 00008 00009 00010 00011 00012 00013 00014 00015 00016 00017 00019 00020 00021 00022 00024 00025 OU 2 OU 3	PIERCE LEAHY 80462352

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M60050 / 001265 RPT N6871192D467000 0002	02-09-1996 11-15-1994 00059 03.5	BECHTEL NATIONAL J. KLEUSENER SOUTHWEST DIVISION J. ASHMAN	SUBMITTAL OF DRAFT HEALTH AND SAFETY PLAN FOR PHASE II RI/FS (REF. DOC# 000955)	ADMIN RECORD	FS H&SP RI TECH/GUID DOC.	00001 00002 00003 00004 00005 00006 00007 00008 00009 00010 00011 00012 00013 00014 00015 00016 00017 00019 00020 00021 00022 00024 00025 OU 2 OU 3	PIERCE LEAHY 80462352

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M60050 / 001307 LTR NONE 0006	03-14-1996 12-20-1994 00059 03 6	DTSC REGION IV J. JIMENEZ MCAS EL TORO W. LEE	DTSC'S REVIEW COMMENTS ON THE HEALTH AND SAFETY PLAN PORTION OF THE PHASE II REMEDIAL INVESTIGATION WORK PLAN	ADMIN RECORD	COMMENTS FS H&SP NFA RI TECH/GUID DOC.	00001 00002 00003 00004 00005 00006 00007 00008 00009 00010 00011 00012 00013 00014 00015 00016 00017 00019 00020 00021 00022 00024 00025	PIERCE LEAHY 80462353

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UIC No. / Rec. Doc. Control No. / Record Type / Contr./Guid. No. / Approx. # Pages	Prc. Date / Record Date / CTO No. / EPA Cat. #	Author Affil. / Author / Recipient Affil. / Recipient	Subject	Classification	Keywords	Sites	Location Box No.
M60050 / 001215 RPT N68711-92-D-4670 0037	01-30-1996 01-01-1995 00059 02.5	BECHTEL NATIONAL SOUTHWEST DIVISION	DRAFT ACTION MEMORANDUM NON-TIME CRITICAL REMOVAL ACTION FOR UNIT 2 OF SITE 19 - AIRCRAFT EXPEDITIONARY	ADMIN RECORD	ACTMEMO NFA NON TCRA	00001 00004 00006 00007 00008 00009 00010 00011 00012 00013 00014 00015 00016 00019 00020 00021 00022 OU 3	SOUTHWEST DIVISION NONE

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UIC No. / Rec. No. Doc. Control No. Record Type Contr./Guid. No. Approx. # Pages	Prc. Date Record Date CTO No. EPA Cat. #	Author Affil. Author Recipient Affil. Recipient	Subject	Classification	Keywords	Sites	Location Box No.
M60050 / 001306	03-14-1996	BECHTEL	DRAFT INVESTIGATION-DERIVED WASTE	ADMIN RECORD	IDWMP	00001	PIERCE LEAHY
	01-01-1995	NATIONAL	MANAGEMENT PLAN		TECH/GUID DOC.	00002	80462353
RPT	00059	T. LATAS				00003	
N6871192D467000	03.4	SOUTHWEST				00004	
0035		DIVISION				00005	
						00006	
						00007	
						00008	
						00009	
						00010	
						00011	
						00012	
						00013	
						00014	
						00015	
						00016	
						00017	
						00019	
						00020	
						00021	
						00022	
						00024	
						00025	

UIC No. / Rec. No. Doc. Control No. Record Type Contr./Guid. No. Approx. # Pages	Prc. Date Record Date CTO No. EPA Cat. #	Author Affil. Author Recipient Affil. Recipient	Subject	Classification	Keywords	Sites	Location Box No.
M60050 / 001263 RPT N6871192D467000 0003	02-09-1996 01-20-1995 00059 03.3	BECHTEL NATIONAL J KLEUSENER SOUTHWEST DIVISION J. ASHMAN	SUBMITTAL OF DRAFT INVESTIGATION DERIVED WASTE MANAGEMENT PLAN FOR PHASE II RI/FS (REF. DOC# 001306)	ADMIN RECORD	FS IDWMP RI TECH/GUID DOC.	00001 00002 00003 00004 00005 00006 00007 00008 00009 00010 00011 00012 00013 00014 00015 00016 00017 00019 00020 00021 00022 00024 00025 OU 2 OU 3	PIERCE LEAHY 80462352

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UIC No. / Rec. No. Doc. Control No. Record Type Contr./Guid. No. Approx. # Pages	Prc. Date Record Date CTO No. EPA Cat. #	Author Affil. Author Recipient Affil. Recipient	Subject	Classification	Keywords	Sites	Location Box No.
M60050 / 001309	03-14-1996	DTSC REGION IV	DTSC'S DRAFT HEALTH AND SAFETY COMMENTS FOR THE PHASE II RI/FS	ADMIN RECORD	COMMENTS	00001	PIERCE LEAHY
	01-20-1995	J. JIMENEZ			H&SP	00002	80462353
LTR	00059	MCAS EL TORO			TECH/GUID DOC.	00003	
NONE	03.6	W. LEE				00004	
0005						00005	
						00006	
						00007	
						00008	
						00009	
						00010	
						00011	
						00012	
						00013	
						00014	
						00015	
						00016	
						00017	
						00019	
						00020	
						00021	
						00022	
						00024	
						00025	

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UIC No. / Rec. No. Doc. Control No. Record Type Contr./Guid. No. Approx. # Pages	Prc. Date Record Date CTO No. EPA Cat. #	Author Affil. Author Recipient Affil. Recipient	Subject	Classification	Keywords	Sites	Location Box No.
M60050 / 001189 RPT N68711-92-D-4670 0250	01-22-1996 03-01-1995 00059 03 5	BECHTEL NATIONAL T.W. LATAS SOUTHWEST DIVISION	FINAL HEATH AND SAFETY PLAN SUPPLEMENT PHASE II RI/FS	ADMIN RECORD INFO REPOSITORY	H&SP TECH/GUID DOC.	00002 00003 00004 00005 00006 00007 00008 00009 00010 00011 00012 00013 00014 00015 00016 00017 00019 00020 00021 00022 00024 00025 OU 1 OU 2 OU 2A OU 2B OU 2C OU 3	PIERCE LEAHY 80462350
M60050 / 001190 PLAN N68711-92-D-4670 1200	01-22-1996 03-01-1995 00059 03.3	BECHTEL NATIONAL T.W. LATAS SOUTHWEST DIVISION	REVISED DRAFT WORK PLAN PHASE II RI/FS	ADMIN RECORD	FS NFA RI TECH/GUID DOC.	OU 1 OU 2 OU 3	PIERCE LEAHY 80462350

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UIC No. / Rec. No. Doc. Control No. Record Type Contr./Guid. No. Approx. # Pages	Prc. Date Record Date CTO No. EPA Cat. #	Author Affil. Author Recipient Affil. Recipient	Subject	Classification	Keywords	Sites	Location Box No.
M60050 / 001234	01-31-1996	BECHTEL	DRAFT FIELD SAMPLING PLAN PHASE II	ADMIN RECORD	FS	00001	PIERCE LEAHY
	03-01-1995	NATIONAL	RI/FS		NFA	00002	80462352
RPT	00059	T. LATAS			RI	00003	
N6871192D467000	03.2	SOUTHWEST			TECH/GUID DOC.	00004	
0200		DIVISION				00005	
						00006	
						00007	
						00008	
						00009	
						00010	
						00011	
						00012	
						00013	
						00014	
						00015	
						00016	
						00017	
						00018	
						00019	
						00020	
						00021	
						00022	
						00023	
						00024	
						00025	
						OU 1	
						OU 2	
						OU 3	

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UIC No. / Rec. No. Doc. Control No. Record Type Contr./Guid. No. Approx. # Pages	Prc. Date Record Date CTO No. EPA Cat. #	Author Affil. Author Recipient Affil. Recipient	Subject	Classification	Keywords	Sites	Location Box No.
M60050 / 001261 RPT N6871192D467000 0002	02-09-1996 03-01-1995 00059 02.7	BECHTEL NATIONAL D. COWSER SOUTHWEST DIVISION J. ASHMAN	SUBMITTAL OF DRAFT QUALITY ASSURANCE PROJECT PLAN FOR THE PHASE II RI/FS (REF. DOC# 000835)	ADMIN RECORD	FS NFA RI TECH/GUID DOC.	00001 00002 00003 00004 00005 00006 00007 00008 00009 00010 00011 00012 00013 00014 00015 00016 00017 00019 00020 00021 00022 00024 00025 OU 2 OU 3	PIERCE LEAHY 80462352

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UIC No. / Rec. No. Doc. Control No. Record Type Contr./Guid. No. Approx. # Pages	Prc. Date Record Date CTO No. EPA Cat. #	Author Affil. Author Recipient Affil. Recipient	Subject	Classification	Keywords	Sites	Location Box No.
M60050 / 000917 PLAN N6871189D929600 0750	07-20-1995 03-03-1995 00284 01.1	JACOBS ENGINEERING B. ARTHUR SOUTHWEST DIVISION J. JOYCE	BASE REALIGNMENT AND CLOSURE (BRAC) CLEANUP PLAN	ADMIN RECORD	BRAC EE/CA NFA TECH/GUID DOC.	00001 00002 00003 00004 00005 00006 00007 00008 00009 00010 00011 00012 00013 00014 00015 00016 00017 00019 00020 00021 00022 00024 00025 OU 1 OU 2 OU 2A OU 2B OU 2C OU 3 OU 3B	PIERCE LEAHY 80462346

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UIC No. / Rec. No. Doc. Control No. Record Type Contr./Guid. No. Approx. # Pages	Prc. Date Record Date CTO No. EPA Cat. #	Author Affil. Author Recipient Affil. Recipient	Subject	Classification	Keywords	Sites	Location Box No.
M60050 / 001173 LTR NONE 0006	12-26-1995 03-08-1995 NONE 01 1	BECHTEL NATIONAL D.K. COWSER SOUTHWEST DIVISION A. PISZKIN	FEBRUARY 21, 1995 MEETING MINUTES ON THE REVIEW OF THEDRAFT HEALTH AND ECOLOGICAL RISK ASSESSMENT WORK PLAN	ADMIN RECORD	MTG MINS NFA TECH/GUID DOC.	OU 2 OU 3	PIERCE LEAHY 80462350
M60050 / 000653 PLAN N68711-92-D-4670 1500	03-27-1995 03-17-1995 00059 03 3	BECHTEL NATIONAL T.W LATAS SOUTHWEST DIVISION	REVISED DRAFT WORK PLAN PHASE II RI/FS	ADMIN RECORD INFO REPOSITORY	FS NFA RI TECH/GUID DOC.	OU 2 OU 3	SOUTHWEST DIVISION NONE
M60050 / 001280 LTR NONE 0004	03-13-1996 03-27-1995 00059 02.4	DTSC REGION IV J. JIMENEZ MCAS EL TORO J. JOYCE	RWQCB REVIEW COMMENTS ON THE DRAFT INVESTIGATION DERIVED WASTE MANAGEMENT PLAN (IDWMP)	ADMIN RECORD	COMMENTS IDWMP TECH/GUID DOC.	00001 00002 00003 00004 00005 00006 00007 00008 00009 00010 00011 00012 00013 00014 00015 00016 00017 00019 00020 00021 00022 00024 00025	PIERCE LEAHY 80462352

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UIC No. / Rec. No. Doc. Control No. Record Type Contr./Guid. No. Approx. # Pages	Prc. Date Record Date CTO No. EPA Cat. #	Author Affil. Author Recipient Affil. Recipient	Subject	Classification	Keywords	Sites	Location Box No.
M60050 / 001281 MISC NONE 0005	03-13-1996 03-27-1995 00059 03.6	BECHTEL NATIONAL T. LATAS RWQCB L. VITALE	RESPONSE TO COMMENTS FROM TECHNICAL REVIEW BY RWQCB, SWDIV ON DRAFT HEALTH AND SAFETY PLAN SUPPLEMENT PHASE II RI/FS	ADMIN RECORD	FS H&SP RI TECH/GUID DOC.	00001 00002 00003 00004 00005 00006 00007 00008 00009 00010 00011 00012 00013 00014 00015 00016 00017 00019 00020 00021 00022 00024 00025	PIERCE LEAHY 80462352

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UIC No. / Rec. No. Doc. Control No. Record Type Contr./Guid. , -. Approx. # Pages	Prc. Date Record Date CTO No. EPA Cat. #	Author Affil. Author Recipient Affil. Recipient	Subject	Classification	Keywords	Sites	Location Box No.
M60050 / 001257 LTR N6871192D467000 0005	02-09-1996 03-31-1995 00059 02.1	BECHTEL NATIONAL J. KLEUSENER SOUTHWEST DIVISION J. ASHMAN	DRAFT FIELD SAMPLING PLAN FOR THE PHASE II RI/FS	ADMIN RECORD	FS NFA RI TECH/GUID DOC.	00001 00002 00003 00004 00005 00006 00007 00008 00009 00010 00011 00012 00013 00014 00015 00016 00017 00019 00020 00021 00022 00024 00025 OU 2 OU 3	PIERCE LEAHY 80462352

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UIC No. / Rec. Doc. Control No. Record Type Contr./Guid. No. Approx. # Pages	Prc. Date Record Date CTO No. EPA Cat. #	Author Affil. Author Recipient Affil. Recipient	Subject	Classification	Keywords	Sites	Location Box No.
M60050 / 001258 RPT N6871192D467000 0003	02-09-1996 03-31-1995 00059 03 5	BECHTEL NATIONAL J. KLEUSENER SOUTHWEST DIVISION J. ASHMAN	FINAL HEALTH AND SAFETY SUPPLEMENT PHASE II RI/FS AND RESPONSE TO COMMENTS ON HEALTH AND SAFETY SUPPLEMENT	ADMIN RECORD INFO REPOSITORY	COMMENTS H&SP NFA TECH/GUID DOC.	00001 00002 00003 00004 00005 00006 00007 00008 00009 00010 00011 00012 00013 00014 00015 00016 00017 00019 00020 00021 00022 00024 00025 OU 2 OU 3	PIERCE LEAHY 80462352

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Doc. Control No.	Prc. Date	Author Affil.					
Record Type	Record Date	Author					
Contr./Guid. No.	CTO No.	Recipient Affil.					Location
Approx. # Pages	EPA Cat. #	Recipient	Subject	Classification	Keywords	Sites	Box No.
M60050 / 001282	03-13-1996	BECHTEL	RESPONSE TO REGULATORY AGENCY	ADMIN RECORD	COMMENTS	00001	PIERCE LEAHY
	03-31-1995	NATIONAL	(DTSC, RWQCB, USEPA) COMMENTS ON		FS	00002	80462352
MISC	00059	T. LATAS	REVISED DRAFT WORK PLAN PHASE II		NFA	00003	
NONE	03.6	VARIOUS	RI/FS		RI	00004	
0025		AGENCIES			TECH/GUID DOC.	00005	
						00006	
						00007	
						00008	
						00009	
						00010	
						00011	
						00012	
						00013	
						00014	
						00015	
						00016	
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						00019	
						00020	
						00021	
						00022	
						00024	
						00025	

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UIC No. / Rec. No. Doc. Control No. Record Type Contr./Guid. No. Approx. # Pages	Prc. Date Record Date CTO No. EPA Cat. #	Author Affil. Author Recipient Affil. Recipient	Subject	Classification	Keywords	Sites	Location Box No.
M60050 / 001219 RPT N6871192D467000 0067	01-30-1996 04-01-1995 00059 02.4	BECHTEL NATIONAL T. LATAS SOUTHWEST DIVISION	DRAFT ENGINEERING EVALUATION/COST ANALYSIS SITE 4	ADMIN RECORD	EE/CA	00001 00004 00006 00007 00008 00009 00010 00011 00012 00013 00014 00015 00016 00019 00020 00021 00022 OU 3	SOUTHWEST DIVISION NONE

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UIC No. / Rec. No. Doc. Control No. Record Type Contr./Guid. No. Approx. # Pages	Prc. Date Record Date CTO No. EPA Cat. #	Author Affil. Author Recipient Affil. Recipient	Subject	Classification	Keywords	Sites	Location Box No.
M60050 / 001222 RPT N6871192D467000 0075	01-31-1996 04-01-1995 00059 02.4	BECHTEL NATIONAL T. LATAS SOUTHWEST DIVISION	DRAFT ENGINEERING EVALUATION/COST ANALYSIS SITE 13	ADMIN RECORD	EE/CA	00001 00004 00006 00007 00008 00009 00010 00011 00012 00013 00014 00015 00016 00019 00020 00021 00022 OU 3	SOUTHWEST DIVISION NONE

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UIC No. / Rec. No. Doc. Control No. Record Type Contr./Guid. No. Approx. # Pages	Prc. Date Record Date CTO No. EPA Cat. #	Author Affil. Author Recipient Affil. Recipient	Subject	Classification	Keywords	Sites	Location Box No.
M60050 / 001555 LTR N6871192D467000 0004	07-10-1996 04-05-1995 00059 10.1	BECHTEL NATIONAL J. KLEUSENER SOUTHWEST DIVISION J. ASHMAN	BECHTEL'S RESPONSE TO REGULATORY AGENCY COMMENTS TO THE DRAFT DATA MANAGEMENT PLAN, PHASE II REMEDIAL INVESTIGATION/FEASIBILITY STUDY (RI/FS)	ADMIN RECORD	COMMENTS DMP TECH/GUID DOC.	00001 00002 00003 00004 00005 00006 00007 00008 00009 00010 00011 00012 00013 00014 00015 00016 00017 00019 00020 00021 00022 00024 00025 OU 2 OU 3	PIERCE LEAHY 80462365

UIC No. / Rec Doc. Control No. Record Type Contr./Guid. No. Approx. # Pages	Prc. Date Record Date CTO No. EPA Cat. #	Author Affil. Author Recipient Affil. Recipient	Subject	Classification	Keywords	Sites	Location Box No.
M60050 / 001217 RPT N68711-92-D-4670 0067	01-30-1996 05-01-1995 00059 02.4	BECHTEL NATIONAL T. LATAS SOUTHWEST DIVISION	DRAFT ENGINEERING EVALUATION/COST ANALYSIS UNITS 2 AND 3 OF SITE 20	ADMIN RECORD	EE/CA	00001 00004 00006 00007 00008 00009 00010 00011 00012 00013 00014 00015 00016 00019 00020 00021 00022 OU 3	SOUTHWEST DIVISION NONE

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UIC No. / Rec. No. Doc. Control No. Record Type Contr./Guid. No. Approx. # Pages	Prc. Date Record Date CTO No. EPA Cat. #	Author Affil. Author Recipient Affil. Recipient	Subject	Classification	Keywords	Sites	Location Box No.
M60050 / 001223 RPT N6871192D467000 0075	01-31-1996 05-01-1995 00059 02.4	BECHTEL NATIONAL T. LATAS SOUTHWEST DIVISION	DRAFT ENGINEERING EVALUATION/COST ANALYSIS UNIT 1 OF SITE 7	ADMIN RECORD	EE/CA	00001 00004 00006 00007 00008 00009 00010 00011 00012 00013 00014 00015 00016 00019 00020 00021 00022 OU 3	SOUTHWEST DIVISION NONE

UIC No. / Rec. No. Doc. Control No. Record Type Contr./Guid. No. Approx. # Pages	Prc. Date Record Date CTO No. EPA Cat. #	Author Affil Author Recipient Affil. Recipient	Subject	Classification	Keywords	Sites	Location Box No.
M60050 / 001225 RPT N6871192D467000 0075	01-31-1996 05-01-1995 00059 02.4	BECHTEL NATIONAL T. LATAS SOUTHWEST DIVISION	DRAFT ENGINEERING EVALUATION/COST ANALYSIS UNIT 1 OF SITE 14	ADMIN RECORD	EE/CA	00001 00004 00006 00007 00008 00009 00010 00011 00012 00013 00014 00015 00016 00019 00020 00021 00022 OU 3	SOUTHWEST DIVISION NONE

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UIC No. / Rec. No. Doc. Control No. Record Type Contr./Guid. No. Approx. # Pages	Prc. Date Record Date CTO No. EPA Cat. #	Author Affil. Author Recipient Affil. Recipient	Subject	Classification	Keywords	Sites	Location Box No.
M60050 / 001227 RPT N6871192D467000 0075	01-31-1996 05-01-1995 00059 02 4	BECHTEL NATIONAL T. LATAS SOUTHWEST DIVISION	DRAFT ENGINEERING EVALUATION/COST ANALYSIS UNIT 2 OF SITE 19	ADMIN RECORD	EE/CA	00001 00004 00006 00007 00008 00009 00010 00011 00012 00013 00014 00015 00016 00019 00020 00021 00022 OU 3	SOUTHWEST DIVISION NONE

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UIC No. / Rec. No. Doc. Control No. Record Type Contr./Guid. No. Approx. # Pages	Prc. Date Record Date CTO No. EPA Cat. #	Author Affil. Author Recipient Affil. Recipient	Subject	Classification	Keywords	Sites	Location Box No.
M60050 / 001231 RPT N6871192D467000 0075	01-31-1996 **05-01-1995** 00059 02.4	BECHTEL NATIONAL T. LATAS SOUTHWEST DIVISION	DRAFT ENGINEERING EVALUATION/ COST ANALYSIS SITE 11	ADMIN RECORD	EE/CA	00001 00004 00006 00007 00008 00009 00010 00011 00012 00013 00014 00015 00016 00019 00020 00021 00022 OU 3	SOUTHWEST DIVISION NONE

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UIC No. / Rec. No. Doc. Control No. Record Type Contr./Guid. No. Approx. # Pages	Prc. Date Record Date CTO No. EPA Cat. #	Author Affil. Author Recipient Affil. Recipient	Subject	Classification	Keywords	Sites	Location Box No.
M60050 / 001365 RPT N6871192D467000 0075	03-19-1996 05-01-1995 00065 01.1	BECHTEL NATIONAL D. COWSER SOUTHWEST DIVISION G. GARELICK	FINAL ADDENDUM TO THE RCRA FACILITY ASSESSMENT WORK PLAN	ADMIN RECORD	DMP H&SP IDWMP QAPP RFA SWMU	00001 00002 00003 00004 00005 00006 00007 00008 00009 00010 00011 00012 00013 00014 00015 00016 00017 00018 00019 00020 00021 00022 00024 00025 OU 1 OU 2 OU 3	PIERCE LEAHY 80462353

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UIC No. / Rec. No. Doc. Control No. Record Type Contr./Guid. No. Approx. # Pages	Prc. Date Record Date CTO No. EPA Cat. #	Author Affil. Author Recipient Affil. Recipient	Subject	Classification	Keywords	Sites	Location Box No.
M60050 / 001367 MISC NONE 0045	03-19-1996 05-02-1995 00059 02.7	BECHTEL NATIONAL P. WEIGAND VARIOUS	COPY OF MEETING HANDOUT "RECOMMENDED NO FURTHER ACTIONAND REMOVAL ACTION OU-3 SITES", PHASE II RI/FS	ADMIN RECORD	FS NFA OU RI	00001 00002 00003 00004 00005 00006 00007 00008 00009 00010 00011 00012 00013 00014 00015 00016 00017 00019 00020 00021 00022 00024 00025 OU 2 OU 3	PIERCE LEAHY 80462353

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M60050 / 001256 LTR N6871192D467000 0012	02-09-1996 05-05-1995 00059 10 2	BECHTEL NATIONAL J. KLEUSENER SOUTHWEST DIVISION J. ASHMAN	RESPONSE TO REGULATORY AGENCY COMMENTS TO THE DRAFT DATA MANAGEMENT PLAN PHASE II RI/FS	ADMIN RECORD	COMMENTS FS NFA RI TECH/GUID DOC	00001 00002 00003 00004 00005 00006 00007 00008 00009 00010 00011 00012 00013 00014 00015 00016 00017 00019 00020 00021 00022 00024 00025 OU 2 OU 3	PIERCE LEAHY 80462352

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UIC No. / Rec. No. Doc. Control No. Record Type Contract No. Approx. # Pages	Prc. Date Record Date CTO No. EPA Cat. #	Author Affil. Author Recipient Affil. Recipient	Subject	Classification	Keywords	Sites	Location Box No.
M60050 / 001283 MISC N6871192D467000 0003	03-13-1996 05-08-1995 00059 03.6	BECHTEL NATIONAL J. KLEUSENER SOUTHWEST DIVISION J ASHMAN	02 MAY 1995 MEETING MINUTES REGARDING VISIT TO OU-3 SITES PROPOSED FOR RECLASSIFICATION TO NO FURTHER ACTION AT THIS TIME OR REMOVAL ACTION	ADMIN RECORD	MTG MINS OU	00001 00004 00006 00007 00008 00009 00010 00011 00012 00013 00014 00015 00016 00019 00020 00021 00022 OU 3	PIERCE LEAHY 80462352

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UIC No. / Rec. No. Doc. Control No. Record Type Contr./Guid. No. Approx. # Pages	Prc. Date Record Date CTO No. EPA Cat. #	Author Affil. Author Recipient Affil. Recipient	Subject	Classification	Keywords	Sites	Location Box No.
M60050 / 001336 LTR N6871192D467000 0005	03-18-1996 05-08-1995 00080 10.0	BECHTEL NATIONAL D. COWSER SOUTHWEST DIVISION G. GARELICK	TRANSMITTAL OF FIVE REVISED PAGES TO BE INSERTED IN THE HANDOUT "RECOMMENDED NO FURTHER ACTION AND REMOVAL ACTION OU-3 SITES"	ADMIN RECORD	OU	00001 00004 00006 00007 00008 00009 00010 00011 00012 00013 00014 00015 00016 00019 00020 00021 00022 OU 3	PIERCE LEAHY 80462353

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UIC No. / Rec. No. Doc. Control No. Record Type Contr./Guid. No. Approx. # Pages	Prc. Date Record Date CTO No. EPA Cat. #	Author Affil. Author Recipient Affil. Recipient	Subject	Classification	Keywords	Sites	Location Box No.
M60050 / 001310 LTR NONE 0001	03-14-1996 05-11-1995 00059 06.2	DEPT FISH AND GA J. TURNER DTSC REGION IV J. JIMENEZ	DEPT OF FISH AND GAME RESPONSE TO DTSC REQUEST FOR INFORMATION ON APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS ARARS	ADMIN RECORD	ARAR TECH/GUID DOC.	00001 00002 00003 00004 00005 00006 00007 00008 00009 00010 00011 00012 00013 00014 00015 00016 00017 00019 00020 00021 00022 00024 00025	PIERCE LEAHY 80462353

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M60050 / 001259 RPT N6871192D467000 0003	02-09-1996 **05-17-1995** 00059 02 0	BECHTEL NATIONAL J. KLEUSENER SOUTHWEST DIVISION J. ASHMAN	REVISED DRAFT WORK PLAN FOR THE PHASE II RI/FS	ADMIN RECORD	FS NFA RI TECH/GUID DOC	00001 00002 00003 00004 00005 00006 00007 00008 00009 00010 00011 00012 00013 00014 00015 00016 00017 00019 00020 00021 00022 00024 00025 OU 2 OU 3	PIERCE LEAHY 80462352
M60050 / 001351 LTR N6871192D467000 0002	03-18-1996 **05-17-1995** 00080 02.7	BECHTEL NATIONAL D. TEDALDI DTSC REGION IV J. JIMENEZ	BECHTEL'S TECHNICAL REVIEW COMMENTS ON DRAFT EE/CA FOR SITES 4, 11, 13, 14, 19, AND 20 FINDING DOCUMENT TECHNICALLY ACCEPTABLE	ADMIN RECORD	COMMENTS EE/CA	00004 00011 00013 00014 00019 00020	PIERCE LEAHY 80462353

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M60050 / 001403 LTR N6871192D467000 0020	03-20-1996 05-17-1995 00080 03.6	BECHTEL NATIONAL D. TEDALDI DTSC REGION IV J. JIMENEZ	BECHTEL TECHNICAL REVIEW COMMENTS ON DRAFT WORK PLAN AND FIELD SAMPLING PLAN FOR PHASE II RI/FS	ADMIN RECORD	COMMENTS FS NFA RI TECH/GUID DOC.	00001 00002 00003 00004 00005 00006 00007 00008 00009 00010 00011 00012 00013 00014 00015 00016 00017 00019 00020 00021 00022 00024 00025 OU 2 OU 3	PIERCE LEAHY 80462354

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M60050 / 001375 LTR N6871192D467000 0009	03-19-1996 05-22-1995 00080 03.3	BECHTEL NATIONAL D. TEDALDI RWQCB REGION IX L VITALE	BECHTEL'S TECHNICAL REVIEW COMMENTS ON DRAFT WORK PLANAND FIELD SAMPLING PLAN FOR PHASE II RI/FS	ADMIN RECORD	COMMENTS FS NFA RI TECH/GUID DOC.	00001 00002 00003 00004 00005 00006 00007 00008 00009 00010 00011 00012 00013 00014 00015 00016 00017 00019 00020 00021 00022 00024 00025 OU 2 OU 3	PIERCE LEAHY 80462353

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M60050 / 001376 LTR N6871192D467000 0009	03-19-1996 05-22-1995 00080 03.3	BECHTEL NATIONAL D. TEDALDI US EPA REGION IX B. ARTHUR	BECHTEL'S TECHNICAL REVIEW COMMENTS ON DRAFT WORK PLANAND FIELD SAMPLING PLAN FOR PHASE II RI/FS	ADMIN RECORD	COMMENTS NFA SAP TECH/GUID DOC.	00001 00002 00003 00004 00005 00006 00007 00008 00009 00010 00011 00012 00013 00014 00015 00016 00017 00019 00020 00021 00022 00024 00025 OU 2 OU 3	PIERCE LEAHY 80462353

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M60050 / 001565	07-11-1996	RWQCB	REGIONAL WATER QUALITY CONTROL BOARD (RWQCB) COMMENTS ON THE PHASE II DRAFT REMEDIAL INVESTIGATION WORK PLAN	ADMIN RECORD	COMMENTS	00001	PIERCE LEAHY
	05-22-1995				NFA	00002	80462365
MEMO	NONE	DTSC REGION IV			RI	00003	
NONE	10.1	J. JIMENEZ			TECH/GUID DOC.	00004	
0008						00005	
						00006	
						00007	
						00008	
						00009	
						00010	
						00011	
						00012	
						00013	
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						00017	
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						00020	
						00021	
						00022	
						00024	
						00025	
						OU 2	
						OU 3	

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M60050 / 001292	03-13-1996	DTSC REGION IV	DTSC'S REVIEW COMMENTS ON THE REVISED DRAFT WORK PLAN PHASE II RI/FS WORKPLAN	ADMIN RECORD	COMMENTS	00001	PIERCE LEAHY
	05-23-1995	J. JIMENEZ			FS	00002	80462352
LTR	00059	MCAS EL TORO			NFA	00003	
NONE	03.3	J. JOYCE			RI	00004	
0000					TECH/GUID DOC.	00005	
						00006	
						00007	
						00008	
						00009	
						00010	
						00011	
						00012	
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M60050 / 000945 LTR NONE 0042	08-07-1995 05-24-1995 NONE 03 6	EPA SAN FRANCISC B. ARTHUR SOUTHWEST DIVISION J. JOYCE	COMMENTS ON THE REVISED DRAFT WORK PLAN PHASE II RI/ FS STUDY AND DRAFT FIELD SAMPLING PLAN PHASE II RI/FS	ADMIN RECORD	COMMENTS NFA TECH/GUID DOC.	00002 00003 00004 00005 00007 00008 00009 00010 00011 00012 00013 00017 00022 00023 00024	PIERCE LEAHY 80462347

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M60050 / 001293 LTR NONE 0018	03-13-1996 05-24-1995 00059 03.3	US EPA REGION IX B. ARTHUR MCAS EL TORO J. JOYCE	US EPA EVIEW COMMENTS ON THE REVISED DRAFT WORK PLAN PHASE II RI/FS WORKPLAN AND DRAFT FIELD SAMPLING PLAN	ADMIN RECORD	COMMENTS FS NFA RI TECH/GUID DOC.	00001 00002 00003 00004 00005 00006 00007 00008 00009 00010 00011 00012 00013 00014 00015 00016 00017 00019 00020 00021 00022 00024 00025	PIERCE LEAHY 80462352

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M60050 / 001348 LTR N6871192D467000 0005	03-18-1996 **06-09-1995** 00080 03.6	BECHTEL NATIONAL D. TEDALDI SOUTHWEST DIVISION J. JOYCE	BECHTEL'S TECHNICAL REVIEW COMMENTS ON DRAFT RI/FS EVALUATION OF BACKGROUND CONCENTRATIONS OF INORGANIC CONSTITUENTS IN GROUNDWATER PHASE II RI/FS	ADMIN RECORD	COMMENTS FS RI TECH/GUID DOC.	00001 00002 00003 00004 00005 00006 00007 00008 00009 00010 00011 00012 00013 00014 00015 00016 00017 00019 00020 00021 00022 00024 00025 OU 2 OU 3	PIERCE LEAHY 80462353
M60050 / 001252 MISC N6871192D467000 0002	06-07-1995 **06-15-1995** 00059 02.7	BECHTEL NATIONAL D. COWSER SOUTHWEST DIVISION J. ASHMAN	JANUARY 16, 1995 MEETING MINUTES FOR CTO-0059 SITE VISIT - REMOVAL ACTION SITES	ADMIN RECORD	MTG MINS	00004 00007 00011 00013 00014 00019 00020	PIERCE LEAHY 80462352

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M60050 / 001570 MEMO NONE 0004	07-11-1996 **06-19-1995** NONE 02 4	DTSC J. CHRISTOPHER DTSC REGION IV J. JIMENEZ	DRAFT MEMORANDUM TRANSMITTING COMMENTS ON ENGINEERING EVALUATION/COST ANALYSIS (EE/CA) COMPLETEDFOR OPERABLE UNIT (OU) 3 SITES	ADMIN RECORD	COMMENTS EE/CA	00004 00007 00011 00013 00014 00019 00020 OU 3	PIERCE LEAHY 80462365
M60050 / 001312 MEMO NONE 0001	03-14-1996 **06-27-1995** 00059 02 7	RWQCB L. VITALE DTSC REGION IV J. JIMENEZ	RWQCB REVIEW COMMENTS ON DRAFT EE/CA DOCUMENTS FOR SITES 4, 7, 11, 13, 14, 19, AND 20	ADMIN RECORD	COMMENTS EE/CA	00004 00007 00011 00013 00014 00019 00020	PIERCE LEAHY 80462353
M60050 / 001315 MEMO NONE 0002	03-14-1996 **06-27-1995** 00059 02.7	DTSC REGION IV J. CHRISTOPHER DTSC REGION IV J. JIMENEZ	DTSC/RWQCB REVIEW COMMENTS ON DRAFT EE/CA DOCUMENTS FOR SITES 7, 11, 13, 14, 19, AND 20	ADMIN RECORD	COMMENTS EE/CA	00004 00007 00011 00013 00014 00019 00020	PIERCE LEAHY 80462353
M60050 / 001314 MEMO NONE 0002	03-14-1996 **06-28-1995** 00059 02.7	DTSC REGION IV M MINGAY DTSC REGION IV J. JIMENEZ	DTSC REVIEW COMMENTS ON DRAFT EE/CA DOCUMENTS FOR SITES 7, 11, 13, 14, 19, AND 20	ADMIN RECORD	COMMENTS EE/CA	00004 00007 00011 00013 00014 00019 00020	PIERCE LEAHY 80462353

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M60050 / 001313 MEMO NONE 0002	03-14-1996 06-30-1995 00059 02 7	DTSC REGION IV J. CHRISTOPHER DTSC REGION IV J. JIMENEZ	DTSC REVIEW COMMENTS ON DRAFT EE/CA DOCUMENTS FOR SITE7, 11, 13, 14, 19, AND 20	ADMIN RECORD	COMMENTS EE/CA	00004 00007 00011 00013 00014 00019 00020	PIERCE LEAHY 80462353

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M60050 / 001194	01-22-1996	BECHTEL	FINAL WORK PLAN PHASE II RI/FS	ADMIN RECORD	FS	00001	PIERCE LEAHY
	07-01-1995	NATIONAL			NFA	00002	80462351
PLAN	00059	T.W. LATAS			RI	00003	
N68711-92-D-4670	03.3	SOUTHWEST			TECH/GUID DOC.	00004	
1800		DIVISION				00005	
						00006	
						00007	
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						OU 1	
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						OU 2C	
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M60050 / 001233 RPT N6871192D467000 0200	01-31-1996 **07-01-1995** 00059 03.3	BECHTEL NATIONAL T. LATAS SOUTHWEST DIVISION	FINAL WORK PLAN PHASE II RI/FS	ADMIN RECORD	FS NFA RI TECH/GUID DOC	00001 00002 00004 00006 00007 00008 00009 00010 00011 00012 00013 00014 00016 00017 00019 00020 00021 00022 00024 00025 OU 2A OU 2B OU 3	PIERCE LEAHY 80462351
M60050 / 001311 LTR NONE 0002	03-14-1996 **07-07-1995** 00059 02 7	AMERICAN ENVIROT E. COHN GARY MCAS EL TORO J JOYCE	RAB MEMBER REVIEW COMMENTS ON DRAFT EE/CA DOCUMENTS FOR SITES 7, 11, 13, 14, 19, AND 20	ADMIN RECORD	COMMENTS EE/CA RAB	00004 00007 00011 00013 00014 00019 00020	PIERCE LEAHY 80462353

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M60050 / 001246 RPT N6871192D467000 0002	02-09-1996 07-19-1995 00059 10.1	BECHTEL NATIONAL J. KLEUSENER SOUTHWEST DIVISION J. ASHMAN	RESPONSE TO COMMENTS ON INVESTIGATION-DERIVED WASTE MANAGEMENT PLAN PHASE II RI/FS	ADMIN RECORD	FS IDWMP RI TECH/GUID DOC.	00001 00002 00003 00004 00005 00006 00007 00008 00009 00010 00011 00012 00013 00014 00015 00016 00017 00019 00020 00021 00022 00024 00025 OU 2 OU 3	PIERCE LEAHY 80462352

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M60050 / 001248 LTR N6871192D467000 0002	02-09-1996 07-19-1995 00059 10.1	BECHTEL NATIONAL D. COWSER SOUTHWEST DIVISION J. ASHMAN	RESPONSE TO COMMENTS FINAL HEALTH AND SAFETY PLAN SUPPLEMENT PHASE II RI/FS	ADMIN RECORD	COMMENTS FS H&SP RI TECH/GUID DOC.	00001 00002 00003 00004 00005 00006 00007 00008 00009 00010 00011 00012 00013 00014 00015 00016 00017 00019 00020 00021 00022 00024 00025 OU 2 OU 3	PIERCE LEAHY 80462352

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M60050 / 001249 LTR N6871192D467000 0002	02-09-1996 07-19-1995 00059 03.6	BECHTEL NATIONAL J. KLEUSENER SOUTHWEST DIVISION J. ASHMAN	FINAL INVESTIGATION-DERIVED WASTE MANAGEMENT PLAN PHASE II RI/FS	ADMIN RECORD	FS IDWMP RI TECH/GUID DOC.	00001 00002 00003 00004 00005 00006 00007 00008 00009 00010 00011 00012 00013 00014 00015 00016 00017 00019 00020 00021 00022 00024 00025 OU 2 OU 3	PIERCE LEAHY 80462352

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M60050 / 001573 MISC N6871192D467000 0009	07-11-1996 **07-19-1995** 00059 10 1	BECHTEL NATIONAL D COWSER SOUTHWEST DIVISION J ASHMAN	BECHTEL'S RESPONSE TO COMMENTS MADE BY DTSC ON THE FINAL HEALTH AND SAFETY PLAN SUPPLEMENT, PHASE II RI/ FS	ADMIN RECORD	COMMENTS H&SP TECH/GUID DOC	00001 00002 00003 00004 00005 00006 00007 00008 00009 00010 00011 00012 00013 00014 00015 00016 00017 00019 00020 00021 00022 00024 00025 OU 2 OU 3	PIERCE LEAHY 80462365
M60050 / 000950 LTR NONE 0009	08-07-1995 **07-24-1995** NONE 02 7	EPA SAN FRANCISC B ARTHUR SOUTHWEST DIVISION J JOYCE	COMMENTS ON THE DRAFT EE/CA FOR SITES 4,7,11,13,14,19 AND 20	ADMIN RECORD	COMMENTS EE/CA(*)	00004 00007 00011 00013 00014 00019 00020	PIERCE LEAHY 80462347

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M60050 / 001295 MEMO NONE 0003	03-13-1996 **07-24-1995** 00059 02.7	US EPA REGION IX K. GOLDBERG US EPA REGION IX B. ARTHUR	US EPA COMMENTS ON EL TORO EE/CA	ADMIN RECORD	COMMENTS EE/CA	00004 00007 00011 00013 00014 00019 00020	PIERCE LEAHY 80462352
M60050 / 001317 MEMO NONE 0007	03-25-1996 **07-24-1995** NONE 02.7	BCT MEMBERS VARIOUS BECHTEL NATIONAL D. COWSER	BCT MEETING MINUTES FOR MEETING HELD 20 MARCH 1996 TO DISCUSS SITES 24 AND 25, THE OU-3 FIELD WORK, AND THE LANDFILL SITES	ADMIN RECORD	BCT MTG MINS TECH/GUID DOC.	00001 00002 00004 00006 00007 00008 00009 00010 00011 00012 00013 00014 00015 00016 00017 00019 00020 00021 00022 00024 00025 OU 2A OU 2B OU 3	PIERCE LEAHY 80462353

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M60050 / 001349 LTR N6871192D467000 0002	03-18-1996 **07-25-1995** 00080 02.7	BECHTEL NATIONAL D. TEDALDI US EPA REGION IX B. ARTHUR	BECHTEL'S TECHNICAL REVIEW COMMENTS ON DRAFT EE/CA'S FOR SITES 4, 11, 13, 14, 19, AND 20 DRAFT PHASE II RI/FS	ADMIN RECORD	COMMENTS EE/CA FS RI TRC	00004 00011 00013 00014 00019 00020	PIERCE LEAHY 80462353
M60050 / 001350 LTR N6871192D467000 0002	03-18-1996 **07-25-1995** 00080 02 7	BECHTEL NATIONAL D. TEDALDI RWQCB L. VITALE	BECHTEL'S TECHNICAL REVIEW COMMENTS ON DRAFT EE/CA'S FOR SITES 4, 11, 13, 14, 19, AND 20 FINDING DOCUMENT TECHNICALLY ACCEPTABLE	ADMIN RECORD	COMMENTS EE/CA	00004 00011 00013 00014 00019 00020	PIERCE LEAHY 80462353
M60050 / 001316 LTR NONE 0011	03-14-1996 **07-28-1995** NONE 02.7	DTSC REGION IV J. JIMENEZ MCAS EL TORO J. JOYCE	DTSC REVIEW COMMENTS ON DRAFT EE/CA DOCUMENTS FOR SITES 7, 11, 13, 14, 19, AND 20	ADMIN RECORD	COMMENTS EE/CA	00004 00007 00011 00013 00014 00019 00020	PIERCE LEAHY 80462353

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M60050 / 001193	01-22-1996	BECHTEL NATIONAL	FINAL FIELD SAMPLING PLAN PHASE II RI/FS	ADMIN RECORD	FS	00001	PIERCE LEAHY
	08-01-1995				NFA	00002	80462351
PLAN	00059	T.W. LATAS			RI	00003	
N68711-92-D-4670	03.3	SOUTHWEST DIVISION			TECH/GUID DOC.	00004	
1500						00005	
						00006	
						00007	
						00008	
						00009	
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						OU 2A	
						OU 2B	
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						OU 3	

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M60050 / 001244 RPT N6871192D467000 0002	02-09-1996 08-01-1995 00059 01.1	BECHTEL NATIONAL J. KLEUSENER SOUTHWEST DIVISION J. ASHMAN	FINAL QUALITY ASSURANCE PROJECT PLAN, PHASE II RI/FS	ADMIN RECORD INFO REPOSITORY	FS NFA QAPP RI TECH/GUID DOC.	00001 00002 00003 00004 00005 00006 00007 00008 00009 00010 00011 00012 00013 00014 00015 00016 00017 00019 00020 00021 00022 00024 00025 OU 2 OU 3	PIERCE LEAHY 80462352

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M60050 / 001245 LTR N6871192D467000 0015	02-09-1996 08-01-1995 00059 10.1	BECHTEL NATIONAL J. KLEUSENER SOUTHWEST DIVISION J. ASHMAN	RESPONSE TO COMMENTS, DRAFT QUALITY ASSURANCE PROJECT PLAN PHASE II RI/FS	ADMIN RECORD INFO REPOSITORY	COMMENTS FS NFA QAPP RI TECH/GUID DOC.	00001 00002 00003 00004 00005 00006 00007 00008 00009 00010 00011 00012 00013 00014 00015 00016 00017 00019 00020 00021 00022 00024 00025 OU 2 OU 3	PIERCE LEAHY 80462352

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M60050 / 001373 RPT N6871192D467000 0075	03-19-1996 08-01-1995 00059 03.4	BECHTEL NATIONAL D. COWSER SOUTHWEST DIVISION J. ASHMAN	FINAL QUALITY ASSURANCE PROJECT PLAN PHASE II RI/FS	ADMIN RECORD INFO REPOSITORY	NFA QAPP TECH/GUID DOC.	00001 00002 00003 00004 00005 00006 00007 00008 00009 00010 00011 00012 00013 00014 00015 00016 00017 00019 00020 00021 00022 00024 00025 OU 2 OU 3	PIERCE LEAHY 80462353

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M60050 / 001465 RPT N6871192D467000 0075	05-21-1996 08-01-1995 00059 08.0	BECHTEL NATIONAL T. LATAS SOUTHWEST DIVISION	FINAL RISK ASSESSMENT WORK PLAN (DOCUMENT SIGNED 8/29/95)	ADMIN RECORD INFO REPOSITORY	NFA RISK TECH/GUID DOC.	00001 00002 00003 00004 00005 00006 00007 00008 00009 00010 00011 00012 00013 00014 00015 00016 00017 00018 00019 00020 00021 00022 00024 00025 OU 1 OU 2A OU 2B OU 2C OU 3	SOUTHWEST DIVISION NONE

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UIC No. / Rec. No. Doc. Control No. Record Type Contr./Guid. No. Approx. # Pages	Prc. Date Record Date CTO No. EPA Cat. #	Author Affil. Author Recipient Affil. Recipient	Subject	Classification	Keywords	Sites	Location Box No.
M60050 / 000965 LTR NONE 0025	08-29-1995 **08-02-1995** NONE 02 7	DTSC LONG BEACH J.M. JIMENEZ MCAS EL TORO J. JOYCE	REVEIEW COMMENTS ON THE DRAFT EE/CA FRO SITES 4,7,11,13,14,19, & 20	ADMIN RECORD	COMMENTS EE/CA	00004 00007 00011 00013 00014 00019 00020 SWMU 71	PIERCE LEAHY 80462347
M60050 / 001574 LTR NONE 0009	07-11-1996 **08-04-1995** NONE 10 1	US EPA REGION IX B. ARTHUR MCAS EL TORO J JOYCE	US EPA'S COMMENTS ON THE DRAFT ENGINEERING EVALUATION/COST ANALYSIS (EE/CA) FOR SITES 4, 7, 11, 13, 14, 19 AND 20 RECEIVED ON 6/1/95 AND 6/8/95	ADMIN RECORD	COMMENTS EE/CA	00004 00007 00011 00013 00014 00019 00020	PIERCE LEAHY 80462365

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UIC No. / Rec. No. Doc. Control No. Record Type Contr./Guid. No. Approx. # Pages	Prc. Date Record Date CTO No. EPA Cat. #	Author Affil. Author Recipient Affil. Recipient	Subject	Classification	Keywords	Sites	Location Box No.
M60050 / 001243 LTR N6871192D467000 0002	02-08-1996 08-09-1995 00059 10.1	BECHTEL NATIONAL J. KLEUSENER SOUTHWEST DIVISION J. ASHMAN	RESPONSE TO COMMENTS FOR WORK PLAN AND FIELD SAMPLING PLAN PHASE II RI/FS	ADMIN RECORD	COMMENTS FS NFA RI TECH/GUID DOC.	00001 00002 00003 00004 00005 00006 00007 00008 00009 00010 00011 00012 00013 00014 00015 00016 00017 00019 00020 00021 00022 00024 00025 OU 2 OU 3	PIERCE LEAHY 80462352

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UIC No. / Rec. No. Doc. Control No. Record Type Contr./Guid. No. Approx. # Pages	Prc. Date Record Date CTO No. EPA Cat. #	Author Affil. Author Recipient Affil. Recipient	Subject	Classification	Keywords	Sites	Location Box No.
M60050 / 001296 LTR N6871192D467000 0001	03-13-1996 08-09-1995 00059 02.7	BECHTEL NATIONAL D. COWSER DTSC REGION IV J. JIMENEZ	BNI RESPONSE TO DTSC REVIEW QUESTIONS CONCERNING FINALINVESTIGATION DERIVED WASTE MANAGEMENT PLAN FOR PHASE II RI/FS	ADMIN RECORD	COMMENTS FS IDWMP RI TECH/GUID DOC.	00001 00002 00003 00004 00005 00006 00007 00008 00009 00010 00011 00012 00013 00014 00015 00016 00017 00019 00020 00021 00022 00024 00025	PIERCE LEAHY 80462352

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UIC No. / Rec. No. Doc. Control No. Record Type Contr./Guid. No. Approx. # Pages	Prc. Date Record Date CTO No. EPA Cat. #	Author Affil. Author Recipient Affil. Recipient	Subject	Classification	Keywords	Sites	Location Box No.
M60050 / 001372 MISC N6871192D467000 0050	03-19-1996 08-09-1995 00059 10.1	BECHTEL NATIONAL D. COWSER SOUTHWEST DIVISION J ASHMAN	RESPONSE TO VARIOUS REGULATORS' COMMENTS FOR WORK PLANAND FIELD SAMPLING PLAN PHASE II RI/FS	ADMIN RECORD	COMMENTS FS RI TECH/GUID DOC.	00001 00002 00003 00004 00005 00006 00007 00008 00009 00010 00011 00012 00013 00014 00015 00016 00017 00019 00020 00021 00022 00024 00025 OU 2 OU 3	PIERCE LEAHY 80462353

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UIC No / Rec No. Doc. Control No. Record Type Contr./Guid. No. Approx. # Pages	Prc. Date Record Date CTO No. EPA Cat. #	Author Affil. Author Recipient Affil. Recipient	Subject	Classification	Keywords	Sites	Location Box No
M60050 / 001242 RPT N6871192D467000 0002	02-08-1996 08-16-1995 00059 03 2	BECHTEL NATIONAL D COWSER SOUTHWEST DIVISION J ASHMAN	FINAL FIELD SAMPLING PLAN PHASE II RI/FS	ADMIN RECORD INFO REPOSITORY	FS NFA RI TECH/GUID DOC	00001 00002 00003 00004 00005 00006 00007 00008 00009 00010 00011 00012 00013 00014 00015 00016 00017 00019 00020 00021 00022 00024 00025 OU 2 OU 3	PIERCE LEAHY 80462352
M60050 / 000972 LTR NONE 0013	08-29-1995 08-21-1995 NONE 04 5	SOUTHWEST DIVISI J R PAWLISCH EPA SAN FRANCISC J ANDERSON	APPROACH TO INVESTIGATION & REMEDIATION OF REGIONAL VOC GROUNDWATER CONTAMINATION IN OU 1 IAFS	ADMIN RECORD	VOC	OU 1 OU 2 OU 3 OU 4	PIERCE LEAHY 80462347

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UIC No. / Rec. No. Doc. Control No. Record Type Contr./Guid. No. Approx. # Pages	Prc. Date Record Date CTO No. EPA Cat. #	Author Affil. Author Recipient Affil. Recipient	Subject	Classification	Keywords	Sites	Location Box No.
M60050 / 001297 LTR NONE 0001	03-13-1996 **08-25-1995** 00059 02.7	US EPA REGION IX B. ARTHUR MCAS EL TORO J JOYCE	EPA LETTER STATING CONCERN OVER PLANS TO CONDUCT CPT SOIL GAS TESTING AND HYDROPUNCH SAMPLING BEFORE APPROVAL OF PHASE II RI/FS, QAPP AND FSP	ADMIN RECORD	FS NFA QAPP RI	00001 00002 00003 00004 00005 00006 00007 00008 00009 00010 00011 00012 00013 00014 00015 00016 00017 00019 00020 00021 00022 00024 00025	PIERCE LEAHY 80462352
M60050 / 001390 LTR NONE 0002	03-20-1996 **08-28-1995** NONE 02.7	US EPA REGION IX B. ARTHUR BECHTEL NATIONAL S. ALLIONE	US EPA COMMENTS ON EE/CA'S FOR OU3 SITES 4, 7, 11, 13, 14, 19, AND 20	ADMIN RECORD	COMMENTS EE/CA	00004 00007 00011 00013 00014 00019 00020 OU 3	PIERCE LEAHY 80462354

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UIC No. / Rec. No. Doc. Control No. Record Type Contr./Guid. No. *Approx. # Pages*	Prc. Date Record Date CTO No. EPA Cat. #	Author Affil. Author Recipient Affil. Recipient	Subject	Classification	Keywords	Sites	Location Box No.
M60050 / 000987 MISC NONE 0008	10-04-1995 **09-01-1995** NONE 10 4	JACOBS ENGINEERING COMMUNITY MEMBER	PUBLIC NOTICE ANNOUNCING AVAILABILITY FOR PUBLIC REVIEW OF EE/CA FOR SITE 4,7,11,13,14,19, & 20	ADMIN RECORD	EE/CA PUB. PARTICIPAT	00004 00007 00011 00013 00014 00019 00020	SOUTHWEST DIVISION NONE
M60050 / 001216 RPT N68711-92-D-4670 0067	01-30-1996 **09-01-1995** 00059 02 4	BECHTEL NATIONAL T. LATAS SOUTHWEST DIVISION	DRAFT FINAL ENGINEERING EVALUATION/COST ANALYSIS UNIT 1 OF SITE 7	ADMIN RECORD	EE/CA	00001 00004 00006 00007 00008 00009 00010 00011 00012 00013 00014 00015 00016 00019 00020 00021 00022 OU 3	SOUTHWEST DIVISION NONE

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UIC No. / Rec. No. Doc. Control No. Record Type Contr./Guid. No. Approx. # Pages	Prc. Date Record Date CTO No. EPA Cat. #	Author Affil. Author Recipient Affil. Recipient	Subject	Classification	Keywords	Sites	Location Box No.
M60050 / 001218 RPT N6871192D467000 0067	01-30-1996 09-01-1995 00059 02.4	BECHTEL NATIONAL T. LATAS SOUTHWEST DIVISION	DRAFT FINAL ENGINEERING EVALUATION/COST ANALYSIS UNIT 1 OF SITE 14	ADMIN RECORD	E.E/CA	00001 00004 00006 00007 00008 00009 00010 00011 00012 00013 00014 00015 00016 00019 00020 00021 00022 OU 3	SOUTHWEST DIVISION NONE

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UIC No. / Rec. . Doc. Control No. Record Type Contr./Guid. No. Approx. # Pages	Prc. Date Record Date CTO No. EPA Cat. #	Author Affil. Author Recipient Affil. Recipient	Subject	Classification	Keywords	Sites	Location Box No.
M60050 / 001220	*01-30-1996*	BECHTEL NATIONAL	DRAFT FINAL ENGINEERING EVALUATION/COST ANALYSIS SITE 13	ADMIN RECORD	EE/CA	00001	SOUTHWEST DIVISION
	09-01-1995					00004	
RPT	00059	T. LATAS				00006	NONE
N6871192D467000	02.4	SOUTHWEST DIVISION				00007	
0075						00008	
						00009	
						00010	
						00011	
						00012	
						00013	
						00014	
						00015	
						00016	
						00019	
						00020	
						00021	
						00022	
						OU 3	

UIC No. / Rec. No. Doc. Control No. Record Type Contr./Guid. No. Approx. # Pages	Prc. Date Record Date CTO No. EPA Cat. #	Author Affil. Author Recipient Affil. Recipient	Subject	Classification	Keywords	Sites	Location Box No.
M60050 / 001221 RPT N6871192D467000 0075	01-31-1996 09-01-1995 00059 02 4	BECHTEL NATIONAL T. LATAS SOUTHWEST DIVISION	DRAFT FINAL ENGINEERING EVALUATION/COST ANALYSIS SITE 4	ADMIN RECORD	EE/CA	00001 00004 00006 00007 00008 00009 00010 00011 00012 00013 00014 00015 00016 00019 00020 00021 00022 OU 3	SOUTHWEST DIVISION NONE

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UIC No. / Rec. No. Doc. Control No. Record Type Contr./Guid. No. Approx. # Pages	Prc. Date Record Date CTO No. EPA Cat. #	Author Affil. Author Recipient Affil. Recipient	Subject	Classification	Keywords	Sites	Location Box No.
M60050 / 001224 RPT N6871192D467000 0075	01-31-1996 09-01-1995 00059 02.4	BECHTEL NATIONAL T. LATAS SOUTHWEST DIVISION	DRAFT FINAL ENGINEERING EVALUATION/COST ANALYSIS UNITS 2 AND 3 OF SITE 20	ADMIN RECORD	EE/CA	00001 00004 00006 00007 00008 00009 00010 00011 00012 00013 00014 00015 00016 00019 00020 00021 00022 OU 3	SOUTHWEST DIVISION NONE

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UIC No. / Rec. No. Doc. Control No. Record Type Contr./Guid. No. Approx. # Pages	Prc. Date Record Date CTO No. EPA Cat. #	Author Affil. Author Recipient Affil. Recipient	Subject	Classification	Keywords	Sites	Location Box No.
M60050 / 001226 RPT N6871192D467000 0075	01-31-1996 09-01-1995 00059 02.4	BECHTEL NATIONAL T. LATAS SOUTHWEST DIVISION	DRAFT FINAL ENGINEERING EVALUATION/COST ANALYSIS UNIT 2 OF SITE 19	ADMIN RECORD	EE/CA	00001 00004 00006 00007 00008 00009 00010 00011 00012 00013 00014 00015 00016 00019 00020 00021 00022 OU 3	SOUTHWEST DIVISION NONE

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UIC No. / Rec. No. Doc. Control No. Record Type Contr./Guid. No. Approx. # Pages	Prc. Date Record Date CTO No. EPA Cat. #	Author Affil. Author Recipient Affil. Recipient	Subject	Classification	Keywords	Sites	Location Box No.
M60050 / 001230 RPT N6871192D467000 0075	01-31-1996 **09-01-1995** 00059 02.4	BECHTEL NATIONAL T. LATAS SOUTHWEST DIVISION	DRAFT FINAL ENGINEERING EVALUATION/ COST ANALYSIS SITE 11	ADMIN RECORD	EE/CA	00001 00004 00006 00007 00008 00009 00010 00011 00012 00013 00014 00015 00016 00019 00020 00021 00022 OU 3	SOUTHWEST DIVISION NONE
M60050 / 001053 LTR NONE 0003	12-11-1995 **09-05-1995** NONE 01.6	EPA SAN FRANCISC B. ARTHUR MCAS EL TORO J. JOYCE	COMMENTS ON THE FINAL QUALITY ASSURANCE PROJECT PLAN	ADMIN RECORD	COMMENTS QAPP TECH/GUID DOC.	OU 2 OU 2A OU 2B OU 2C OU 3	PIERCE LEAHY 80462364

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Record Type	Record Date	Author					
Contr./Guid. No.	CTO No.	Recipient Affil.					Location
Approx. # Pages	EPA Cat. #	Recipient	Subject	Classification	Keywords	Sites	Box No.
M60050 / 001239	02-08-1996	BECHTEL NATIONAL	RESPONSE TO COMMENTS DOCUMENT, PREPARED IN CONJUNCTIONWITH THE FINAL RISK ASSESSMENT WORK PLAN PHASE II RI/FS	ADMIN RECORD	COMMENTS	00001	PIERCE LEAHY
	09-06-1995	J. KLEUSENER			FS	00002	80462352
LTR	00059	SOUTHWEST DIVISION			NFA	00003	
N6871192D467000	10.1	P. KENNEDY			RI	00004	
0003					RISK	00005	
					TECH/GUID DOC.	00006	
						00007	
						00008	
						00009	
						00010	
						00011	
						00012	
						00013	
						00014	
						00015	
						00016	
						00017	
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						00020	
						00021	
						00022	
						00024	
						00025	
						OU 2	
						OU 3	

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M60050 / 001240 LTR N6871192D467000 0002	02-08-1996 09-06-1995 00059 08.2	BECHTEL NATIONAL J. KLEUSENER SOUTHWEST DIVISION J. ASHMAN	FINAL RISK ASSESSMENT WORK PLAN PHASE II RI/FS	ADMIN RECORD	FS NFA RI TECH/GUID DOC.	00001 00002 00003 00004 00005 00006 00007 00008 00009 00010 00011 00012 00013 00014 00015 00016 00017 00019 00020 00021 00022 00024 00025 OU 2 OU 3	PIERCE LEAHY 80462352

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M60050 / 001353 MISC N6871192D467000 0001	03-18-1996 09-06-1995 00080 03.6	BECHTEL NATIONAL D. TEDALDI SOUTHWEST DIVISION J. ASHMAN	FINAL TECHNICAL NOTES/COMMENTS ON DRAFT RI/FS EVALUATION OF BACKGROUND CONCENTRATIONS OF INORGANIC CONSTITUENTS IN GROUNDWATER CLEAN I PHASE I RI/FS	ADMIN RECORD	COMMENTS FS GW RI TECH/GUID DOC.	00001 00002 00003 00004 00005 00006 00007 00008 00009 00010 00011 00012 00013 00014 00015 00016 00017 00019 00020 00021 00022 00024	PIERCE LEAHY 80462353

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M60050 / 001370 RPT N6871192D467000 0130	03-19-1996 09-06-1995 00059 08 0	BECHTEL NATIONAL D COWSER SOUTHWEST DIVISION J ASHMAN	FINAL RISK ASSESSMENT WORK PLAN PHASE II RI/FS	ADMIN RECORD INFO REPOSITORY	FS NFA RI RISK TECH/GUID DOC	00001 00002 00003 00004 00005 00006 00007 00008 00009 00010 00011 00012 00013 00014 00015 00016 00017 00019 00020 00021 00022 00024 00025 OU 2 OU 3	PIERCE LEAHY 80462353

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M60050 / 001371 MISC N6871192D467000 0020	03-19-1996 09-06-1995 00059 10.1	BECHTEL NATIONAL D. COWSER SOUTHWEST DIVISION J. ASHMAN	RESPONSES TO VARIOUS AGENCIES COMMENTS ON THE FINAL RISK ASSESSMENT WORKPLAN FOR PHASE II RI/FS	ADMIN RECORD	COMMENTS FS NFA RI RISK TECH/GUID DOC.	00001 00002 00003 00004 00005 00006 00007 00008 00009 00010 00011 00012 00013 00014 00015 00016 00017 00019 00020 00021 00022 00024 00025 OU 2 OU 3	PIERCE LEAHY 80462353

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M60050 / 001337 MISC NONE 0015	03-18-1996 **09-11-1995** 00076 03 6	BECHTEL NATIONAL M. DALYRYMPLE SOUTHWEST DIVISION J. ASHMAN	11 SEPTEMBER 1995 MEETING MINUTES REGARDING THE INFORMAL CONSULTATION FOR THE PHASE II RI/FS FIELD ACTIVITIES IN THE CONSERVATION AREA	ADMIN RECORD	FS RI TECH/GUID DOC.	00001 00002 00003 00004 00005 00006 00007 00008 00009 00010 00011 00012 00013 00014 00015 00016 00019 00020 00021 00022 OU 1 OU 2 OU 3	PIERCE LEAHY 80462353
M60050 / 001056 LTR NONE 0002	12-11-1995 **09-12-1995** NONE 02.7	CITY OF IRVINE P. HERSH SOUTHWEST DIVISION J. JOYCE	CONCERNS WITH COMMENTS DISCUSSED AT THE RAB MEETING ON AUGUST 31, 1995 REGARDING THE EE/CA FOR SITES 4,7, 11,13,14,19, & 20	ADMIN RECORD	COMMENTS RAB	00004 00007 00011 00013 00014 00019 00020 OU 3	PIERCE LEAHY 80462364

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M60050 / 001300 MISC NONE 0001	03-14-1996 09-15-1995 NONE 03 6	US EPA REGION IX BECHTEL NATIONAL D. COWSER	US EPA COMMENTS ON THE MCAS EL TORO FINAL WORK PLAN AND FIELD SAMPLING PLAN PHASE II RI/FS	ADMIN RECORD	COMMENTS FS NFA RI TECH/GUID DOC.	00001 00002 00003 00004 00005 00006 00007 00008 00009 00010 00011 00012 00013 00014 00015 00016 00017 00019 00020 00021 00022 00024 00025	PIERCE LEAHY 80462352
M60050 / 001059 LTR NONE 0002	12-11-1995 09-19-1995 NONE 03.3	EPA SAN FRANCISC B. ARTHUR SOUTHWEST DIVISION J. JOYCE	COMMENTS ON THE FINAL PHASE II RI/FS WORKPLAN AND FIELD SAMPLING PLAN IN EITHER REVISED PAGES OR BY ADDENDUM	ADMIN RECORD	COMMENTS NFA RI TECH/GUID DOC.	00003 00007 00012 00024 OU 2 OU 2A OU 3	PIERCE LEAHY 80462364

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Doc. Control No.	Prc. Date	Author Affil.					
Record Type	Record Date	Author					
Contr./Guid. No.	CTO No.	Recipient Affil.					Location
Approx. # Pages	EPA Cat. #	Recipient	Subject	Classification	Keywords	Sites	Box No.
M60050 / 001356	03-18-1996	BECHTEL	SUBMITTAL OF BECHTEL'S FINAL NOTES	ADMIN RECORD	COMMENTS	00001	PIERCE LEAHY
	09-20-1995	NATIONAL	REGARDING RESPONSE TO COMMENTS		FS	00002	80462353
LTR	00080	D TEDALDI	DOCUMENT PREPARED IN CONJUNCTION		RI	00003	
N6871192D467000	08 3	VARIOUS	WITH THE FINAL RISK ASSESSMENT WORK		RISK	00004	
0028		AGENCIES	PLAN PHASE II RI/FS		TECH/GUID DOC	00005	
						00006	
						00007	
						00008	
						00009	
						00010	
						00011	
						00012	
						00013	
						00014	
						00015	
						00016	
						00017	
						00018	
						00019	
						00020	
						00021	
						00022	
						00024	
						00025	
						OU 1	
						OU 2	
						OU 3	

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M60050 / 001232 LTR N6871192D467000 0018	01-31-1996 10-04-1995 00059 10.1	BECHTEL NATIONAL J. KLEUSENER SOUTHWEST DIVISION P. KENNEDY	RESPONSE TO COMMENTS ON TECHNICAL REVIEW OF EE/CA FOR VARIOUS SITES PHASE II RI/FS	ADMIN RECORD	COMMENTS EE/CA FS RI	00001 00004 00006 00007 00008 00009 00010 00011 00012 00013 00014 00015 00016 00019 00020 00021 00022 OU 1 OU 2 OU 3	SOUTHWEST DIVISION NONE
M60050 / 001238 LTR N6871192D467000 0008	02-08-1996 10-04-1995 00059 10.1	BECHTEL NATIONAL J. KLEUSENER SOUTHWEST DIVISION P. KENNEDY	RESPONSE TO COMMENTS ON TECHNICAL REVIEW OF ENGINEERING EVALUATION/COST ANALYSIS (EE/CA) FOR VARIOUS SITES	ADMIN RECORD	COMMENTS EE/CA	00004 00007 00011 00013 00014 00019 00020	PIERCE LEAHY 80462352
M60050 / 001328 MISC NONE 0001	03-18-1996 10-11-1995 00063 10.3	BECHTEL NATIONAL MCAS EL TORO	PUBLIC NOTICE ANNOUNCING EXTENSION OF PUBLIC COMMENT PERIOD FOR EE/CA FOR SITES 4, 7, 11, 13, 14, 19 AND 20	ADMIN RECORD	EE/CA PUBNOT	00004 00007 00011 00013 00014 00019 00020	PIERCE LEAHY 80462353

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M60050 / 001377 MISC N6871192D467000 0009	03-19-1996 10-18-1995 00080 10 1	BECHTEL NATIONAL D. TEDALDI SOUTHWEST DIVISION P. KENNEDY	SUBMITTAL OF BECHTEL'S REVIEW COMMENTS ON DRAFT QAPP, SAP, AND DATA MANAGEMENT PLAN FOR GROUNDWATER MONITORING	ADMIN RECORD	DMP GW IDWMP QAPP SAP TECH/GUID DOC.	00001 00002 00003 00004 00005 00006 00007 00008 00009 00010 00011 00012 00013 00014 00015 00016 00017 00019 00020 00021 00022 00024 00025 OU 2 OU 3	PIERCE LEAHY 80462353
M60050 / 001428 MISC NONE 0004	04-03-1996 10-18-1995 00063 10 0	VARIOUS NEWSPAPE PUBLIC	PUBLIC NOTICE ANNOUNCING PUBLIC COMMENT PERIOD FOR EE/CAS FOR SITES 4,7,11,13,14,19, AND 20 APPEARING IN OC REGISTER AND LA TIMES	ADMIN RECORD	EE/CA PUB. PARTICIPAT PUBNOT	00004 00007 00011 00013 00014 00019 00020	PIERCE LEAHY 80462355

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M60050 / 001363 LTR N6871192D467000 0001	03-18-1996 **10-23-1995** 00076 03.6	BECHTEL NATIONAL D. COWSER SOUTHWEST DIVISION P. KENNEDY	LETTER INITIATING ECOLOGICAL RISK ASSESSMENT AS PART OF THE PHASE II RI/FS	ADMIN RECORD	FS RI RISK TECH/GUID DOC.	00001 00002 00003 00004 00005 00006 00007 00008 00009 00010 00011 00012 00013 00014 00015 00016 00017 00019 00020 00021 00022 00024 00025 OU 2 OU 3	PIERCE LEAHY 80462353
M60050 / 001665 MEMO NONE 0001	09-30-1996 **10-23-1995** NONE 10.1	CRWQCB RIVERSIDE L. VITALE DTSC LONG BEACH J. JIMENEZ	REVIEW OF DRAFT FINAL EE/CA FOR SITES 4,7,11,13,14, UNIT 2 OF 19 AND SITE 20. NO SIGNIFICANT COMMENTS	ADMIN RECORD	EE/CA	00004 00007 00011 00013 00014 00019 00020	PIERCE LEAHY 80462359

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UIC No. / Rec. Doc. Control No. Record Type Contr./Guid. No. Approx. # Pages	Prc. Date Record Date CTO No. EPA Cat. #	Author Affil. Author Recipient Affil. Recipient	Subject	Classification	Keywords	Sites	Location Box No.
M60050 / 001237 LTR N6871192D467000 0008	02-08-1996 11-06-1995 00059 10.1	BECHTEL NATIONAL D. COWSER SOUTHWEST DIVISION P. KENNEDY	RESPONSE TO COMMENTS FOR FINAL QUALITY ASSURANCE PROJECT PLAN PHASE II RI/FS	ADMIN RECORD	COMMENTS FS NFA QAPP RI TECH/GUID DOC.	00001 00002 00003 00004 00005 00006 00007 00008 00009 00010 00011 00012 00013 00014 00015 00016 00017 00019 00020 00021 00022 00024 00025 OU 2 OU 3	PIERCE LEAHY 80462352
M60050 / 001197 LTR NONE 0002	01-23-1996 11-13-1995 00145 01.6	EPA SAN FRANCISC B. ARTHUR MCAS EL TORO J. JOYCE	COMMENTS ON DRAFT FINAL EE/CA REPORTS FOR SITES 4,7, 11, 13, 14, 19, AND 20	ADMIN RECORD	COMMENTS EE/CA	00004 00007 00011 00013 00014 00019 00020 OU 3	SOUTHWEST DIVISION NONE

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UIC No. / Rec. No. Doc. Control No. Record Type Contr./Guid. No. Approx. # Pages	Prc. Date Record Date CTO No. EPA Cat. #	Author Affil. Author Recipient Affil. Recipient	Subject	Classification	Keywords	Sites	Location Box No.
M60050 / 001301 MISC NONE 0004	03-14-1996 11-17-1995 00059 02.7	DTSC REGION IV J. JIMENEZ MCAS EL TORO J. JOYCE	DTSC'S REVIEW COMMENTS ON THE DRAFT FINAL EE/CA FOR SITES 4, 7, 11, 13, 14, 19 AND 20	ADMIN RECORD	COMMENTS EE/CA	00004 00007 00011 00013 00014 00019 00020	PIERCE LEAHY 80462353
M60050 / 001391 MISC NONE 0003	03-20-1996 11-17-1995 NONE 10.6	MCAS EL TORO B. BARTELT BECHTEL NATIONAL A. SCHWARTZ	FAX OF PRESS RELEASE ANNOUNCING EXTENSION OF PUBLIC COMMENT PERIOD ON THE SEVEN SITES EE/CA	ADMIN RECORD	EE/CA PRESS REL PUB. PARTICIPAT PUBNOT	00004 00007 00011 00013 00014 00015 00016 00019 00020 OU 3	PIERCE LEAHY 80462354

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M60050 / 001228 LTR N6871192D467000 0020	01-31-1996 **11-21-1995** 00063 10.1	BECHTEL NATIONAL H. MASRI SOUTHWEST DIVISION P. KENNEDY	RESPONSE TO COMMENTS FOR MCAS TUSTIN AND MCAS EL TORO DRAFT REVISED COMMUNITY RELATIONS PLAN	ADMIN RECORD	COMMENTS	00001 00002 00003 00004 00005 00006 00007 00008 00009 00010 00011 00012 00013 00014 00015 00016 00017 00018 00019 00020 00021 00022 00023 00024 00025 OU 1 OU 2 OU 3	SOUTHWEST DIVISION NONE
M60050 / 001229 LTR N6871192D467000 0004	01-31-1996 **11-27-1995** 00063 10.1	BECHTEL NATIONAL D. COWSER SOUTHWEST DIVISION P. KENNEDY	RESPONSE TO COMMENTS FOR DRAFT FINAL WORK PLAN AND FIELD SAMPLING PLAN PHASE II REMEDIAL INVESTIGATION/ FEASIBILITY STUDY	ADMIN RECORD	COMMENTS FS NFA RI TECH/GUID DOC.	00004 00007 00011 00013 00014 00019 00020	SOUTHWEST DIVISION NONE

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M60050 / 001236 LTR N6871192D467000 0008	02-08-1996 **11-27-1995** 00059 10.1	BECHTEL NATIONAL D. COWSER SOUTHWEST DIVISION P. KENNEDY	RESPONSE TO COMMENTS FOR DRAFT FINAL WORKPLAN AND FIELD SAMPLING PLAN PHASE II RI/FS	ADMIN RECORD	NFA RI TECH/GUID DOC.	00001 00002 00003 00004 00005 00006 00007 00008 00009 00010 00011 00012 00013 00014 00015 00016 00017 00019 00020 00021 00022 00024 00025 OU 2 OU 3	PIERCE LEAHY 80462352
M60050 / 001201 LTR NONE 0003	01-23-1996 **11-29-1995** NONE 05 4	MCAS EL TORO J. JOYCE CITY OF IRVINE P. HERSH	LETTER RESPONDING TO THE CITY OF IRVINE'S COMMENTS REGARDING INDUSTRIAL CLEANUP STANDARDS FOR REMOVAL ACTIONS ON SITES 4,7,11,13,14,19,20	ADMIN RECORD	COMMENTS EE/CA	00004 00007 00011 00013 00014 00019 00020 OU 2 OU 3	SOUTHWEST DIVISION NONE

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UIC No. / Rec. No. Doc. Control No. Record Type Contr./Guid. No. Approx. # Pages	Prc. Date Record Date CTO No. EPA Cat. #	Author Affil. Author Recipient Affil. Recipient	Subject	Classification		Keywords	Sites	Location Box No.
M60050 / 001381 MISC NONE 0040	03-19-1996 01-01-1996 NONE 06.3	BECHTEL NATIONAL SOUTHWEST DIVISION	REQUEST FOR PETROLEUM EXCLUSION FOR SELECTED OPERABLE UNIT 3 SITES MCAS EL TORO - DRAFT FOR DISCUSSION PURPOSES ONLY	ADMIN RECORD	OU		00001 00004 00006 00007 00008 00009 00010 00011 00012 00013 00014 00015 00016 00019 00020 00021 00022 OU 3	PIERCE LEAHY 80462354

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M60050 / 001235 MISC N6871192D467000 0010	02-08-1996 01-03-1996 NONE 02.5	BECHTEL NATIONAL D. COWSER SOUTHWEST DIVISION P. KENNEDY	REVISED TABLES 1 AND 2 OF DRAFT ACTION MEMORANDUM NON-TIME CRITICAL REMOVAL ACTION FOR UNIT 2 OF SITE 19	ADMIN RECORD	ACTMEMO TCRA	00001 00004 00006 00007 00008 00009 00010 00011 00012 00013 00014 00015 00016 00019 00020 00021 00022 OU 3	PIERCE LEAHY 80462352

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M60050 / 001466 RPT N6871192D467000 0300	05-21-1996 01-22-1996 00103 03.3	BECHTEL NATIONAL D. COWSER SOUTHWEST DIVISION P. KENNEDY	DRAFT 1996 BASE REALIGNMENT AND CLOSURE CLEANUP PLAN	ADMIN RECORD	BCP	00001 00002 00003 00004 00005 00006 00007 00008 00009 00010 00011 00012 00013 00014 00015 00016 00017 00018 00019 00020 00021 00022 00024 00025 OU 1 OU 2A OU 2B OU 2C OU 3	PIERCE LEAHY 80462357

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M60050 / 001378 MISC N6871192D467000 0002	03-19-1996 01-29-1996 00079 03 6	BECHTEL NATIONAL D. COWSER SOUTHWEST DIVISION P. KENNEDY	MEETING MINUTES FROM 24 JANUARY 1996 WEEKLY BCT BRIEFING FOR PHASE II RI/FS	ADMIN RECORD	BCP FS MTG MINS RI TECH/GUID DOC.	00001 00002 00003 00004 00005 00006 00007 00008 00009 00010 00011 00012 00013 00014 00015 00016 00017 00019 00020 00021 00022 00024 00025 OU 2 OU 3	PIERCE LEAHY 80462353

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M60050 / 001276 MISC N6871192D467000 0020	03-12-1996 02-06-1996 NONE 11.3	BECHTEL NATIONAL D. COWSER SOUTHWEST DIVISION P. KENNEDY	MEETING MINUTES 30 JANUARY 1996 WEEKLY BRAC CLEANUP TEAM (BCT) FOR PHASE II RI/FS MCAS EL TORO	ADMIN RECORD	BRAC MTG MINS NFA TECH/GUID DOC.	00001 00002 00003 00004 00005 00006 00007 00008 00009 00010 00011 00012 00013 00014 00015 00016 00017 00019 00020 00021 00022 00024 00025 OU 2 OU 3	PIERCE LEAHY 80462352

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M60050 / 001397 MISC N6871192D467000 0019	03-20-1996 02-06-1996 00079 05.4	BECHTEL NATIONAL D. COWSER SOUTHWEST DIVISION P. KENNEDY	MEETING MINTUES FOR THE 30 JANUARY 1996 WEEKLY BASE CLEANUP TEAM BRIEFING HELD TO DISCUSS OU3, THE BCP, OU2A, AND THE LANDFILL SITES AND MEETING MATERIALS	ADMIN RECORD	BCP MTG MINS TECH/GUID DOC.	00001 00004 00006 00007 00008 00009 00010 00011 00012 00013 00014 00015 00016 00019 00020 00021 00022 00024 00025 OU 2A OU 3	PIERCE LEAHY 80462354

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UIC No. / Rec. No. Doc. Control No. Record Type Contr./Guid. No. Approx. # Pages	Prc. Date Record Date CTO No. EPA Cat. #	Author Affil. Author Recipient Affil. Recipient	Subject	Classification	Keywords	Sites	Location Box No.
M60050 / 001399 MISC N6871192D467000 0003	03-20-1996 02-14-1996 00079 05.4	BECHTEL NATIONAL D. COWSER SOUTHWEST DIVISION P. KENNEDY	MEETING MINTUES 07 FEBRUARY 1996 WEEKLY BCT BRIEFING HELD TO DISCUSS OU3, THE BCP, LANDFILL SITES, OU2A, OU2B	ADMIN RECORD	BCP MTG MINS NFA TECH/GUID DOC.	00001 00002 00004 00007 00008 00009 00010 00011 00012 00013 00014 00015 00016 00017 00019 00020 00021 00022 00024 00025 OU 2A OU 2B OU 3	PIERCE LEAHY 80462354

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Doc. Control No.	Prc. Date	Author Affil.					
Record Type	Record Date	Author					
Contr./Guid. No.	CTO No.	Recipient Affil.					Location
Approx. # Pages	EPA Cat. #	Recipient	Subject	Classification	Keywords	Sites	Box No.
M60050 / 001398	03-20-1996	BECHTEL NATIONAL	MEETING MINTUES 14 FEBRUARY 1996 WEEKLY BCT BRIEFING HELD TO DISCUSS OU2A, OU2B, THE RCRA FACILITY ASSESSMENT, AND THE BCP	ADMIN RECORD	BCP	00001	PIERCE LEAHY
	02-20-1996	D. COWSER			MTG MINS	00002	80462354
MISC	00079	SOUTHWEST DIVISION			RFA	00004	
N6871192D467000	05.4	P. KENNEDY			TECH/GUID DOC.	00006	
0003						00007	
						00008	
						00009	
						00010	
						00011	
						00012	
						00013	
						00014	
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						00024	
						00025	
						OU 2A	
						OU 2B	

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M60050 / 001395	03-20-1996	DTSC REGION IV	DTSC COMMENTS ON THE DRAFT FINAL ADDENDUM TO THE RCRA FACILITY ASSESSMENT	ADMIN RECORD	COMMENTS	00001	PIERCE LEAHY
	02-23-1996	T. MAHMOUD			RFA	00002	80462354
LTR	00065	MCAS EL TORO				00003	
NONE	10.1	J. JOYCE				00004	
0010						00005	
						00006	
						00007	
						00008	
						00009	
						00010	
						00011	
						00012	
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						OU 2	
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M60050 / 001273 MISC N6871192D467000 0005	03-07-1996 02-26-1996 00103 06.0	BECHTEL NATIONAL D. COWSER SOUTHWEST DIVISION P. KENNEDY	MEETING MINUTES - 20 FEBRUARY 1996 BRAC CLEANUP PLAN MEETING HELD TO DISCUSS COMMENTS ON THE BCP AND DISTRIBUTION OF THE BCP	ADMIN RECORD	BCP MTG MINS	00001 00002 00003 00004 00005 00006 00007 00008 00009 00010 00011 00012 00013 00014 00015 00016 00017 00018 00019 00020 00021 00022 00024 00025 OU 1 OU 2 OU 3	PIERCE LEAHY 80462352

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M60050 / 001401 MISC N6871192D467000 0250	03-20-1996 03-01-1996 00079 05 4	BECHTEL NATIONAL D COWSER SOUTHWEST DIVISION P KENNEDY	BASE REALIGNMENT AND CLOSURE PLAN (BCP) DATED MARCH 1, 1996 (SIGNED 2/20/96)	ADMIN RECORD INFO REPOSITORY	BCP NFA TECH/GUID DOC	00001 00002 00003 00004 00005 00006 00007 00008 00009 00010 00011 00012 00013 00014 00015 00016 00017 00018 00019 00020 00021 00022 00024 00025 OU 1 OU 2 OU 3	PIERCE LEAHY 80462354

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M60050 / 001396 MISC N6871192D467000 0009	03-20-1996 03-05-1996 00079 05.4	BECHTEL NATIONAL D. COWSER SOUTHWEST DIVISION P. KENNEDY	MEETING MINUTES FOR THE 28 FEBRUARUY 1996 BASE CLEANUPTEAM MEETING HELD TO DISCUSS OU3, THE BCP, OU2A, AND THE LANDFILL SITES	ADMIN RECORD	BCP MTG MINS NFA TECH/GUID DOC.	00001 00004 00006 00007 00008 00009 00010 00011 00012 00013 00014 00015 00016 00019 00020 00021 00022 00024 00025 OU 2A OU 3	PIERCE LEAHY 80462354
M60050 / 001382 MISC N6871192D467000 0020	03-20-1996 03-12-1996 00079 05.4	BECHTEL NATIONAL D. COWSER SOUTHWEST DIVISION P. KENNEDY	MEETING MINUTES FOR 6 MARCH 1996 BASE CLEANUP TEAM MEETING HELD TO DISCUSS SITES 24,25, LANDFILL SITES, AND OU3 FIELD WORK; MEETING MATERIALS	ADMIN RECORD	CLEANUP MTG MINS NFA TECH/GUID DOC.	00024 00025 OU 3	PIERCE LEAHY 80462354

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M60050 / 001617 LTR NONE 0006	09-04-1996 03-12-1996 00080 10.1	DTSC LONG BEACH T. MAHMOUD MCAS EL TORO J. JOYCE	COMMENTS AND RECOMMENDATIONS ON THE FINAL RESULTS OF EMPLOYEE INTERVIEW, AUGUST 17, 1996 FOR THE NO FURTHER ACTION DETERMINATIONS W/ENCL	ADMIN RECORD	COMMENTS NFA	00006 00007 00008 00009 00010 00012 00014 00017 00019 00023 00024	PIERCE LEAHY 80462365

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M60050 / 001393 RPT N68711-92-D-4670 0150	03-20-1996 03-14-1996 00073 03.4	BECHTEL NATIONAL D. COWSER SOUTHWEST DIVISION P. KENNEDY	REPORT ENTITLED DRAFT GROUNDWATER EXTRACTION AND INJECTION WELL AQUIFER TESTS FOR FINAL PHASE II RI/FS WORK PLAN	ADMIN RECORD	FS GW RI	00001 00002 00003 00004 00005 00006 00007 00008 00009 00010 00011 00012 00013 00014 00015 00016 00017 00019 00020 00021 00022 00024 00025 OU 2 OU 3	PIERCE LEAHY 80462354

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M60050 / 001419 LTR N6871192D467000 0025	04-03-1996 03-28-1996 0063B 10.0	BECHTEL NATIONAL D. COWSER SOUTHWEST DIVISION P. KENNEDY	LETTER TRANSMITTING COPY OF MATERIALS FOR "CURRENT STATUS MCAS EL TORO ENVIRONMENTAL INVESTIGATION INSTALLATION RESTORATION PROGRAM" PRESENTATION	ADMIN RECORD	IRP	00001 00002 00003 00004 00005 00006 00007 00008 00009 00010 00011 00012 00013 00014 00015 00016 00017 00018 00019 00020 00021 00022 00024 00025 OU 1 OU 2 OU 3	PIERCE LEAHY 80462355

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M60050 / 001331 MISC N6871192D467000 0007	03-18-1996 04-01-1996 00079 03.6	BECHTEL NATIONAL D. COWSER SOUTHWEST DIVISION P. KENNEDY	MEETING MINUTES FOR 27 MARCH 1996 WEEKLY BASE CLEANUP TEAM MEETING HELD TO DISCUSS SITES 24 AND 25, THE LANDFILL SITES, AND OU3 (SITE 15) FIELDWORK	ADMIN RECORD	BCT MTG MINS NFA OU TECH/GUID DOC.	00001 00002 00003 00004 00005 00006 00007 00008 00009 00010 00011 00012 00013 00014 00015 00016 00017 00019 00020 00021 00022 00024 00025 OU 2A OU 2B OU 3	PIERCE LEAHY 80462353

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UIC No. / Rec No. Doc. Control No Record Type Contr./Guid. No. Approx. # Pages	Prc. Date Record Date CTO No. EPA Cat. #	Author Affil. Author Recipient Affil. Recipient	Subject	Classification	Keywords	Sites	Location Box No.
M60050 / 000365 MM N68711-92-D-4670 0005	06-19-1996 04-17-1996 00079 00 0	BECHTEL NATIONAL D COWSER SOUTHWEST DIVISION P KENNEDY	MINUTES FROM 10 APRIL 1996 WEEKLY BRAC CLEANUP TEAM MEETING HELD TO DISCUSS OU2A, OU2B, OU3, AND RCRA FACILITY ASSESSMENT ADDENDUM	ADMIN RECORD	BCP MTG MINS NFA RFA TECH/GUID DOC	00001 00002 00003 00004 00006 00007 00008 00009 00010 00011 00012 00013 00014 00015 00016 00017 00019 00020 00021 00022 00024 00025 OU 2A OU 2B OU 3	SOUTHWEST DIVISION NONE

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M60050 / 000837 MM N68711-92-D-4670 0030	06-19-1996 05-16-1996 00079 00.0	BECHTEL NATIONAL D. COWSER SOUTHWEST DIVISION P. KENNEDY	MINUTES FROM 7 MAY 1996 BRAC CLEANUP TEAM MEETING HELD TO DISCUSS OU2A, OU2B, AND OU3 SOIL SAMPLING RESULTS	ADMIN RECORD	BCP MTG MINS TECH/GUID DOC.	00001 00002 00004 00006 00007 00008 00009 00010 00011 00012 00013 00014 00015 00016 00017 00019 00020 00021 00022 00024 00025 OU 2A OU 2B OU 3	PIERCE LEAHY 80462345

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M60050 / 001515 CTO-0079/0140 RPT N68711-92-D-4670 0030	07-03-1996 06-01-1996 00079 01.1	BECHTEL NATIONAL D. COWSER SOUTHWEST DIVISION P. KENNEDY	TECHNICAL MEMORANDUM REVISED RISK ASSESSMENT PROCEDURES (DOCUMENT SIGNED 10 JUNE 1996)	ADMIN RECORD	NFA RISK TECH MEMO TECH/GUID DOC.	00001 00004 00006 00007 00008 00009 00010 00011 00012 00013 00014 00015 00016 00019 00020 00021 00022 00023 OU 3	PIERCE LEAHY 80462364

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UIC No. / Rec. No. Doc. Control No. Record Type Cont. Guid. No. Approx. # Pages	Prc. Date Record Date CTO No. EPA Cat. #	Author Affil. Author Recipient Affil. Recipient	Subject	Classification	Keywords	Sites	Location Box No.
M60050 / 001507 LTR N6871192D467000 0025	06-06-1996 06-05-1996 00065 10.1	BECHTEL NATIONAL D. COWSER SOUTHWEST DIVISION P. KENNEDY	DOCUMENT REVIEW COMMENTS AND RESPONSES ON FINAL RCRA FACILITY ASSESSMENT ADDENDUM	ADMIN RECORD	COMMENTS RFA	00001 00002 00003 00004 00005 00006 00007 00008 00009 00010 00011 00012 00013 00014 00015 00016 00017 00019 00020 00021 00022 00024 00025 OU 2A OU 2B OU 2C OU 3	PIERCE LEAHY 80462364

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M60050 / 002264 MISC N6871192D467000 0350	09-21-1998 06-06-1996 00079 03.2	BECHTEL NATIONAL D. TEDALDI SOUTHWEST DIVISION C. POTTER	CHAIN OF CUSTODY RECORDS, PHASE II RI/FS, SHALLOW SOIL SITES	ADMIN RECORD	FS OU RI SOIL	00004 00006 00008 00009 00010 00011 00012 00013 00015 00016 00019 00020 00021 00022 OU 3	SOUTHWEST DIVISION NONE

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UIC No. / Rec. No. Doc. Control No. Record Type Contr./Guid. No. Approx. # Pages	Prc. Date Record Date CTO No. EPA Cat. #	Author Affil. Author Recipient Affil. Recipient	Subject	Classification	Keywords	Sites	Location Box No.
M60050 / 001516 MM N6871192D467000 0005	07-03-1996 06-14-1996 00079 01.1	BECHTEL NATIONAL D. COWSER SOUTHWEST DIVISION P. KENNEDY	MEETING MINUTES FROM 5 JUNE 1996 BRAC CLEANUP TEAM (BCT) MEETING HELD TO DISCUSS OU 1, 2A, 2B, 2C, 3 AND THE SITE 25 RI/FS	ADMIN RECORD	BCT FS MTG MINS RI TECH/GUID DOC.	00001 00002 00003 00004 00005 00006 00007 00008 00009 00010 00011 00012 00013 00014 00015 00016 00017 00018 00019 00020 00021 00022 00024 00025 OU 1 OU 2A OU 2B OU 2C OU 3	PIERCE LEAHY 80462364
M60050 / 002266 MISC N6871192D467000 0190	09-21-1998 07-08-1996 00073 03.2	BECHTEL NATIONAL D. TEDALDI SOUTHWEST DIVISION C. POTTER	CHAIN OF CUSTODY RECORDS, PHASE II RI/FS, VOC SOURCE AREA AND MAJOR DRAINAGES	ADMIN RECORD	FS RI VOC	00024 00025 OU 2A OU 3	SOUTHWEST DIVISION NONE

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UIC No. / Rec. No. Doc. Control No. Record Type Contr./Guid. No. Approx. # Pages	Prc. Date Record Date CTO No. EPA Cat. #	Author Affil. Author Recipient Affil. Recipient	Subject	Classification	Keywords	Sites	Location Box No.
M60050 / 001600 LTR NONE 0004	09-04-1996 **07-24-1996** NONE 10.1	DTSC LONG BEACH T. MAHMOUD MCAS EL TORO J. JOYCE	COMMENTS ON TECHNICAL MEMORANDUM RISK ASSESSMENT PROCEDURES W/ENCL	ADMIN RECORD INFO REPOSITORY	COMMENTS NFA TECH/GUID DOC.	OU 3	PIERCE LEAHY 80462365
M60050 / 002161 CTO-0076/0296 FAX NONE 0018	04-15-1998 **08-07-1996** 00076 01.1	DTSC LONG BEACH T. MAHMOUD BECHTEL NATIONAL T. LATAS	FAXED INFORMATION REGARDING LANDFILLS ARARS FOR GEORGE AFB; REVIEW OF THE DRAFT FINAL OU 3 RI/FS DATED AUGUST 1995	ADMIN RECORD	ARAR FS LANDFILL RI TECH/GUID DOC.	OU 3	SOUTHWEST DIVISION NONE
M60050 / 001656 XMTL N6871192D467000 0003	09-27-1996 **08-13-1996** 00079 10.1	BNI SAN DIEGO D.K. COWSER SOUTHWEST DIVISION R. SELBY	RESPONSE TO COMMENTS TECHNICAL MEMORANDUM REVISED RISK ASSESSMENT PROCEDURES	ADMIN RECORD INFO REPOSITORY	ASSESSMENT RESPONSE RISK TECH/GUID DOC.	00001 00004 00007 00013 00014 00015 00019 00020 00023 OU 3	PIERCE LEAHY 80462359
M60050 / 001631 LTR NONE 0002	09-16-1996 **08-28-1996** NONE 06.0	MCAS EL TORO J. JOYCE CRWQCB RIVERSIDE L. VITALE	CONFIRMATION ON THE AGREEMENTS CONCERNING IRP SITE 20 OU2 & OU3 MADE DURING THE BRAC, BCT MEETING OF AUGUST 21, 1996	ADMIN RECORD	BRAC CLOSURE IRP UST	00020 OU 2 OU 3	PIERCE LEAHY 80462358

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UIC No. / Rec Doc. Control No. Record Type Contr./Guid. No. Approx. # Pages	Prc. Date Record Date CTO No. EPA Cat. #	Author Affil. Author Recipient Affil. Recipient	Subject	Classification	Keywords	Sites	Location Box No.
M60050 / 001671 XMTL N6871192D467000 0013	09-30-1996 09-11-1996 0063B 10.5	BNI SAN DIEGO D. COWSER SOUTHWEST DIVISION R. SELBY	SEPTEMBER 25, 1996, DRAFT RAB MEETING AGENDA SITE (B) BASEWIDE COMMUNITY RELATIONS SUPPORT MEETING MAILER & JULY 31, 1996 DRAFT MEETING MINUTES	ADMIN RECORD INFO REPOSITORY	CRP MTG MINS NFA PUB. PARTICIPAT RAB	00002 00004 00007 00011 00013 00014 00017 00019 00020 B OU 2A	PIERCE LEAHY 80462359

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UIC No. / Rec. No. Doc. Control No. Record Type Contr./Guid. No. Approx. # Pages	Prc. Date Record Date CTO No. EPA Cat. #	Author Affil. Author Recipient Affil. Recipient	Subject	Classification	Keywords	Sites	Location Box No.
M60050 / 001268 CTO-0059/0033 RPT N68711-92-D-4670 0070	02-09-1996 11-04-1996 00059 02.4	BECHTEL NATIONAL T. LATAS SOUTHWEST DIVISION J. ASHMAN	DRAFT RISK ASSESSMENT WORK PLAN FOR THE PHASE II RI/FS (DOCUMENT NEEDS TO BE RE-IMAGED - DUE TO TRANSMITTAL LETTER ONLY BEING IMAGED)	ADMIN RECORD	FS NFA PCE RI TCE TECH/GUID DOC. VOC	00001 00002 00003 00004 00005 00006 00007 00008 00009 00010 00011 00012 00013 00014 00015 00016 00017 00019 00020 00021 00022 00024 00025 OU 2 OU 3	SOUTHWEST DIVISION NONE

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M60050 / 001730	01-29-1997 01-01-1997	BECHTEL NATIONAL	DRAFT BASE REALIGNMENT AND CLOSURE CLEANUP PLAN (BCP)	ADMIN RECORD	BCP CLEANUP	00001 00002	PIERCE LEAHY 80462363
PLAN	00103	J. KLUESENER			CLOSURE	00003	
NONE	04.4					00004	
1500						00005	
						00006	
						00007	
						00008	
						00009	
						00010	
						00011	
						00012	
						00013	
						00014	
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						00019	
						00020	
						00021	
						00022	
						00024	
						00025	
						OU 1	
						OU 2	
						OU 2A	
						OU 2B	
						OU 2C	
						OU 3	
						OU 3A	
						OU 3B	

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M60050 / 002064 LTR NONE 0004	01-30-1998 01-05-1997 NONE 10.1	DTSC LONG BEACH J. SCANDURA MCAS EL TORO J. JOYCE	DTSC'S RESPONSE TO MCAS EL TORO'S REQUEST FOR EXTENSIONS TO THE FEDERAL FACILITY AGREEMENT (FFA) SCHEDULES	ADMIN RECORD	FFA GW LANDFILL REQUEST RESPONSE ROD	00001 00002 00003 00005 00007 00008 00011 00012 00014 00016 00017 00018 00024 OU 1 OU 2A OU 2B OU 2C OU 3	SOUTHWEST DIVISION NONE
M60050 / 001817 MISC NONE 0017	03-21-1997 01-09-1997 NONE 10 4	MCAS EL TORO J. JOYCE	DEFENSE ENVIRONMENTAL RESPONSE TASK FORCE (DERTF) PRESENTATION	ADMIN RECORD INFO REPOSITORY	PUB. PARTICIPAT RAB RESPONSE	00002 00003 00005 00017 OU 1 OU 2A OU 2B OU 2C OU 3	SOUTHWEST DIVISION NONE

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UIC No. / Rec. No. Doc. Control No. Record Type Contr./Guid. No Approx. # Pages	Prc. Date Record Date CTO No. EPA Cat. #	Author Affil. Author Recipient Affil. Recipient	Subject	Classification	Keywords	Sites	Location Box No.
M60050 / 001729 RPT N6871192D467000 2000	01-29-1997 01-21-1997 00073 03.4	BECHTEL NATIONAL G.P.BROOKS SOUTHWEST DIVISION	DRAFT PHASE II REMEDIAL INVESTIGATION/FEASIBILITY STUDY ADDENDUM SITE 25	ADMIN RECORD INFO REPOSITORY	ADPM FS NFA RI	00001 00002 00003 00004 00005 00006 00008 00009 00010 00011 00012 00013 00015 00016 00017 00018 00019 00020 00021 00022 00024 00025 OU 1 OU 2A OU 2B OU 2C OU 3	PIERCE LEAHY 80462362

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M60050 / 001745 PLAN N6871192D467000 2000	03-17-1997 01-30-1997 00103 04.2	SOUTHWEST DIVISI MCAS EL TORO	BASE REALIGNMENT AND CLOSURE CLEANUP PLAN (BCP) DATED MARCH 1997	ADMIN RECORD INFO REPOSITORY	BCP CLEANUP NFA TECH/GUID DOC.	00001 00002 00003 00004 00005 00006 00007 00008 00009 00010 00011 00012 00013 00014 00015 00016 00017 00018 00019 00020 00021 00022 00024 00025 OU 1 OU 2 OU 2A OU 2B OU 2C OU 3 OU 3A OU 3B	SOUTHWEST DIVISION NONE

UIC No. / Rec. No. Doc. Control No. Record Type Contr./Guid. No. Approx. # Pages	Prc. Date Record Date CTO No. EPA Cat. #	Author Affil. Author Recipient Affil. Recipient	Subject	Classification		Keywords	Sites	Location Box No.
M60050 / 001737 RPT N6871192D467000 3050	03-17-1997 03-11-1997 00073 03.4	BECHTEL NATIONAL G. BROOKS SOUTHWEST DIVISION	DRAFT FINAL PHASE II REMEDIAL INVESTIGATION REPORT OPERABLE UNIT 2A-SITE 24 VOLUME I, VOLUME II, VOLUME III, APPENDICES A-J, VOLUME IV, APPENDICES K-P	ADMIN RECORD INFO REPOSITORY	RI		00007 00008 00009 00010 00011 00012 00022 00024 00025 BLDG. 296 BLDG. 297 BLDG. 299 BLDG. 326 BLDG. 359 BLDG. 360 BLDG. 529 BLDG. 655 BLDG. 800 OU 1 OU 2A OU 3	PIERCE LEAHY 80462363

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M60050 / 001934 MISC N6871192D467000 0017	05-28-1997 05-28-1997 0063B 10 4	BECHTEL NATIONAL C. CARLISLE VARIOUS AGENCIES	SITE (B) BASEWIDE COMMUNITY RELATIONS SUPPORT-INCLUDESMAY 28, 1997 RAB AGENDA, MARCH 26, 1997 DRAFT MEETING MINUTES, PUBLIC NOTICE & (MAILING LIST IN CONFIDNTL)	ADMIN RECORD CONFIDENTIAL DOC INFO REPOSITORY	CRP MTG MINS PUB. PARTICIPAT RAB	00001 00002 00003 00004 00005 00006 00007 00008 00010 00011 00012 00013 00015 00016 00017 00019 00020 00021 00022 00024 00025 OU 1 OU 2C OU 3 OU 3A	SOUTHWEST DIVISION NONE

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M60050 / 002039 MISC NONE 0071	11-24-1997 09-24-1997 NONE 10 6	MCAS EL TORO RAB RAB MEMBERS	SEPTEMBER 24, 1997, RAB MEETING, PUBLIC INFORMATION MATERIALS INCLUDES: RAB MTG.AGENDA, PUBLIC NOTICE, RAB MTG MINS OF 8/6/97, MISC. AGENCIES COMMENTS	ADMIN RECORD INFO REPOSITORY	COMMENTS MTG MINS PUB. PARTICIPAT PUBNOT RAB	00001 00004 00006 00007 00008 00009 00010 00011 00012 00013 00014 00015 00016 00019 00020 00021 00022 00024 OU 2A OU 3 OU 3A	SOUTHWEST DIVISION NONE
M60050 / 002225 RPT N6871196D202900 1500	07-30-1998 10-01-1997 DO 05 01.2	CDM FEDERAL CORP L. DAVIDSON SOUTHWEST DIVISION	FINAL GROUNDWATER MONITORING REPORT FOR JULY 1997 SAMPLING ROUND	ADMIN RECORD INFO REPOSITORY	GW MONITORING NFA VOC VOLATILES	OU 1 OU 2A OU 2B OU 2C OU 3	SOUTHWEST DIVISION NONE

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M60050 / 002026 LTR NONE 0049	11-21-1997 **10-29-1997** NONE 01 6	DTSC LONG BEACH M. MINGAY VARIOUS AGENCIES	RESPONSIVENESS SUMMARY FOR PROPOSED PLAN OU 2A VADOSE ZONE; FORWARDED TO INDIVIDUALS WHO SUBMITTED COMMENTS (MAILING LIST IN CONFIDENTIAL FILE)	ADMIN RECORD CONFIDENTIAL DOC	COMMENTS OU PUB PARTICIPAT	00007 00008 00009 00010 00011 00022 00024 BLDG. 296 BLDG. 297 OU 2A	SOUTHWEST DIVISION NONE
M60050 / 002192 LTR NONE 0003	05-07-1998 **04-08-1998** NONE 01.6	DTSC CYPRESS J. SCANDURA VARIOUS AGENCIES	REQUEST FOR EXTENSION TO THE FEDERAL FACILITY AGREEMENT (FFA) SCHEDULES	ADMIN RECORD	FFA GW LANDFILL NFA REQUEST ROD TECH/GUID DOC.	00002 00003 00005 00008 00011 00012 00017 00018 00024 OU 1 OU 2A OU 3	SOUTHWEST DIVISION NONE
M60050 / 002212 LTR NONE 0012	07-21-1998 **06-16-1998** NONE 01 6	MCAS EL TORO J. JOYCE VARIOUS AGENCIES	SUBMITTAL OF FFA SCHEDULE CHANGE REQUEST FOR TWO GROUPS OF OU 3 SITES (8, 11, 12 AND 7, 14, 16)	ADMIN RECORD	CLEANUP FFA GW LANDFILL NFA	00007 00008 00011 00012 00014 00016 OU 3	SOUTHWEST DIVISION NONE
M60050 / 002250 CTO-0155/0217 PLAN N68711-92-D-4670 0013	08-31-1998 **07-24-1998** 155-2 03.3	BECHTEL NATIONAL D. TEDALDI VARIOUS AGENCIES	DRAFT PROPOSED PLAN FOR CLEANUP AT THREE SHALLOW SOIL SITES, OPERABLE UNIT 3, SITES 8, 11, AND 12	ADMIN RECORD	CLEANUP IRP NFA PUB. PARTICIPAT SOIL	00008 00011 00012 OU 3	SOUTHWEST DIVISION NONE

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M60050 / 002259 LTR NONE 0012	08-31-1998 08-20-1998 NONE 01 6	MCAS EL TORO J. JOYCE VARIOUS AGENCIES	REQUEST FOR CHANGES IN THE FEDERAL FACILITY AGREEMENT APPENDIX A SCHEDULE FOR PRIMARY DOCUMENTS	ADMIN RECORD	FFA LANDFILL ROD VOC	00002 00003 00005 00007 00014 00016 00017 00018 00024 OU 1 OU 2A OU 3	SOUTHWEST DIVISION NONE
M60050 / 002299 MISC NONE 0011	12-22-1998 09-21-1998 NONE 10.1	DTSC CYPRESS T. MAHMOUD MCAS EL TORO J. JOYCE	COMMENTS ON DRAFT PROPOSED PLAN FOR OPERABLE UNIT 3, SITES 8, 11 AND 12	ADMIN RECORD	COMMENTS LANDFILL NFA OU SOIL	00008 00011 00012 OU 3	SOUTHWEST DIVISION NONE

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M60050 / 002295 MISC NONE 0012	11-17-1998 11-03-1998 NONE 01.1	MCAS EL TORO J. JOYCE VARIOUS AGENCIES	FEDERAL FACILITY AGREEMENT (FFA) APPENDIX A SCHEDULE EXTENSION REQUEST FOR DRAFT RECORD OF DECISION, OPERABLE UNIT 2C, LANDFILL SITES 3 AND 5	ADMIN RECORD	FFA LANDFILL ROD	00001 00002 00003 00004 00005 00006 00007 00008 00009 00010 00011 00012 00013 00014 00015 00016 00017 00018 00019 00020 00021 00022 00024 OU 1 OU 2A OU 2B OU 2C OU 3	SOUTHWEST DIVISION NONE
M60050 / 002301 LTR NONE 0010	12-22-1998 11-30-1998 NONE 01.6	MCAS EL TORO J. JOYCE VARIOUS AGENCIES	REQUEST FOR CHANGE TO THE FFA APPENDIX A SCHEDULE WITH TECH MEMO ON RISK MANAGEMENT CONSIDERATIONS FOR OU-3, SITES 8, 11 AND 12	ADMIN RECORD	FFA NFA RISK TECH MEMO	00008 00011 00012 OU 3	SOUTHWEST DIVISION NONE

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M60050 / 002308 MISC N6871192D467000 0420	12-22-1998 12-14-1998 00178 01 1	BECHTEL NATIONAL D. TEDALDI VARIOUS AGENCIES	DRAFT PLANNING DOCUMENTS (WORK PLANS, FIELD SAMPLING PLANS, QAPP, IDWMP, DMP, S&HP, RAWPA) FOR THE REMEDIAL INVESTIGATION/FEASIBILITY STUDY OU-3B SITES 7, 14, 16	ADMIN RECORD	DMP FS IDWMP QAPP RI SSHP WORK PLAN	00007 00014 00016 OU 3B	SOUTHWEST DIVISION NONE
M60050 / 002317 LTR NONE 0004	04-06-1999 12-21-1998 NONE 10 1	DTSC T. MAHMOUD MCAS EL TORO J. JOYCE	COMMENTS ON TECHNICAL MEMORANDUM ON RISK MANAGEMENT FOR OU-3 SITES 8, 11 AND 12		COMMENTS NFA TECH MEMO	00008 00011 00012 OU 3	SOUTHWEST DIVISION NONE
M60050 / 002377 LTR NONE 0007	04-12-1999 01-29-1999 NONE 10.1	EPA G. KISTNER MCAS EL TORO J. JOYCE	U.S. EPA COMMENTS ON DRAFT RECORD OF DECISION		COMMENTS OU ROD	00002 00007 OU 2B	SOUTHWEST DIVISION NONE
M60050 / 002383 CTO-0155/0402 PLAN N6871192D467000 0034	04-13-1999 02-04-1999 00155 02.1	SWDIV G. TINKER VARIOUS AGENCIES	DRAFT FINAL PROPOSED PLAN FOR CLEANUP AT THREE SHALLOW SOIL SITES	ADMIN RECORD INFO REPOSITORY	CLEANUP OU PROPOSED PLAN SOIL	11 12 8 OU 3	SOUTHWEST DIVISION NONE
M60050 / 002389 LTR N6871192D467000 0020	04-13-1999 02-19-1999 00155 10.1	SWDIV G. TINKER VARIOUS AGENCIES	RESPONSE TO COMMENTS DRAFT PROPOSED PLAN FOR CLEANUP AT THREE SHALLOW SOIL SITES OU 3, SITES 8, 11, AND 12		CLEANUP COMMENTS OU PROPOSED PLAN	00008 00011 00012 OU 3	SOUTHWEST DIVISION NONE
M60050 / 002390 LTR NONE 0020	04-13-1999 02-22-1999 NONE 10.1	DTSC J. HUFF MCAS EL TORO J. JOYCE	COMMENTS ON DRAFT FINAL PROPOSED PLAN FOR OU 3 SITES 8, 11 AND 12		COMMENTS OU PROPOSED PLAN	00008 00011 00012 OU 3	SOUTHWEST DIVISION NONE

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M60050 / 002395 LTR N68711-92-D-4670 0030	04-13-1999 **03-17-1999** 00155 10 1	SWDIV G TINKER VARIOUS AGENCIES	RESPONSE TO COMMENTS ON THE DRAFT FINAL PROPOSED PLAN FOR CLEANUP AT OPERABLE UNIT 3, SITES 8, 11, AND 12	ADMIN RECORD	COMMENTS OU PROPOSED PLAN RESPONSE SOIL	00008 00011 00012 OU 3	SOUTHWEST DIVISION NONE
M60050 / 002396 CTO-0155/0446 PLAN N68711-92-D-4670 0030	04-13-1999 **03-17-1999** 00155 03 3	SWDIV G TINKER VARIOUS AGENCIES	REVISED DRAFT FINAL - PROPOSED PLAN FOR CLEANUP AT THREE SHALLOW SOIL SITES	ADMIN RECORD INFO REPOSITORY	CLEANUP LF METALSPCB OU PAH PETROLEUM PROPOSED PLAN ROD SOIL SVOC VOC	11 12 8 OU 3	SOUTHWEST DIVISION NONE
M60050 / 002402 MISC N68711-92-D-4670 0010	05-03-1999 **04-20-1999** 00178 10 1	BNI D. TEDALDI VARIOUS AGENCIES	RESPONSES TO COMMENTS ON THE DRAFT PLANNING DOCUMENTS (WORK PLANS, FIELD SAMPLING PLANS, QAPP, S&HP, RAWPA) FOR THE REMEDIAL INVESTIGATION/FEASIBILITY STUDY	ADMIN RECORD	COMMENTS RESPONSE	00007 00014 OU 3B	SOUTHWEST DIVISION NONE
M60050 / 002404 MISC N68711-92-D-4670 0450	05-03-1999 **04-20-1999** 00178 01 1	BNI D. TEDALDI VARIOUS AGENCIES	FINAL PLANNING DOCUMENTS (WORK PLANS, FIELD SAMPLING PLANS, QAPP, IDWMP, DMP, S&HP, RAWPA) FOR THE PHASE II REMEDIAL INVESTIGATION/ FEASIBILITY STUDY - OU-3B	ADMIN RECORD	DMP FS IDWMP QAPP RA RI SSHP WORK PLAN	00007 00014 00016 OU 3B	SOUTHWEST DIVISION NONE

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M60050 / 002406	05-03-1999	MCAS EL TORO	FEDERAL FACILITY AGREEMENT SCHEDULE	ADMIN RECORD	FFA	00001	SOUTHWEST DIVISION
	04-29-1999	J. JOYCE				00002	
LTR	NONE	VARIOUS AGENCIES				00003	NONE
NONE	03.6					00004	
0004						00005	
						00006	
						00007	
						00008	
						00009	
						00010	
						00011	
						00012	
						00013	
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						00020	
						00021	
						00022	
						00024	
						00025	
						OU 1	
						OU 2A	
						OU 2B	
						OU 2C	
						OU 3	

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M60050 / 000421 CTO-0155/0482 PLAN N68711-92-D-4670 0050	04-19-2000 05-01-1999 155-2	BECHTEL NATIONAL, INC. D. TEDALDI NAVFAC - SOUTHWEST DIVISION R. SELBY	FINAL PROPOSED PLAN - FOR CLEANUP AT THREE SHALLOW SOIL SITES (MAILING LIST IS CONFIDENTIAL)	ADMIN RECORD CONFIDENTIAL	ARAR GW LF METALS NFA OU PAH PCB PESTICIDES PP REMEDIAL ACTIO ROD SOIL SVOC VOC	11 12 8 OU 3	SOUTHWEST DIVISION
M60050 / 002407 PLAN NONE 0000	05-04-1999 05-06-1999 NONE 03.3	SWDIV G. TINKER VARIOUS AGENCIES	FINAL - PROPOSED PLAN FOR CLEANUP	ADMIN RECORD	CLEANUP OU PROPOSED PLAN SOIL	00008 00011 00012 OU 3	SOUTHWEST DIVISION NONE
M60050 / 000056 NONE MEMO NONE 0005	08-04-1999 05-26-1999 NONE 10 4	HAHN & BOWERSOCK CORP J. BURGNER SOUTHWEST DIVISION	TRANSCRIPT OF 5/26/99 PUBLIC COMMENT MEETING FOR PROPOSED PLAN FOR CLEANUP AT OPERABLE UNIT 3, SITES 8, 11 AND 12	ADMIN RECORD	MTG MINS SOIL	11 12 8 OU 3	SOUTHWEST DIVISION NONE
M60050 / 000066 NONE MM NONE 0100	08-04-1999 05-26-1999 NONE 10 5	MCAS EL TORO PUBLIC INTEREST	PUBLIC INFORMATION MATERIALS FOR PUBLIC MEETING HELD 5/26/99 ON PROPOSED PLAN FOR CLEANUP AT OPERABLE UNIT 3, SITES 8, 11 AND 12	ADMIN RECORD	IRP RAB SOIL VOC WATER WELLS	11 12 8 OU 3	SOUTHWEST DIVISION NONE

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M60050 / 000422 CTO-0155/0471 PLAN N68711-92-D-4670 0030	04-19-2000 06-01-1999 155-2	BECHTEL NATIONAL, INC D TEDALDI NAVFAC - SOUTHWEST DIVISION R SELBY	SIGN-OFF VERSION FINAL PROPOSED PLAN FOR CLEANUP AT THREE SHALLOW SOIL SITES	ADMIN RECORD	METALS NFA OU PAH PCB PESTICIDES REMEDIAL ACTIO SLUDGE SOIL SVOC	11 12 8 OU 3	SOUTHWEST DIVISION
M60050 / 000060 NONE LTR NONE 0004	08-04-1999 06-07-1999 NONE 03 1	EL TORO MASTER DEVELOPMENT PRO C WIERCIOCH MCAS EL TORO J JOYCE	COMMENTS ON PROPOSED PLAN FOR CLEANUP AT OPERABLE UNIT 3, SITES 8, 11 AND 12	ADMIN RECORD	COMMENTS ROD SOIL	11 12 17 2 8 OU 3	SOUTHWEST DIVISION NONE
M60050 / 000064 NONE LTR NONE 0002	08-04-1999 06-07-1999 NONE 05 4	BL ASSOCIATES C BENNETT MCAS EL TORO J JOYCE	COMMENTS BY RESTORATION ADVISORY BOARD COMMUNITY CO-CHAIR ON THE PROPOSED PLAN FOR OPERABLE UNIT 3, SITES 8, 11 AND 12	ADMIN RECORD	CERCLA COMMENTS ROD SOIL	11 12 8 OU 3	SOUTHWEST DIVISION NONE
M60050 / 000061 NONE LTR NONE 0000	08-04-1999 06-15-1999 NONE 10 1	USDOI J BARTEL BRAC EL TORO J JOYCE	DEPT OF INTERIOR COMMENTS ON PROPOSED PLAN FOR CLEANUP AT OPERABLE UNIT 3, SITES 8, 11 AND 12	ADMIN RECORD	COMMENTS LF PAH PCB ROD SOIL VOC	11 12 17 2 8 OU 3	SOUTHWEST DIVISION NONE
M60050 / 000059 CTO-0164/0053 RPT N68711-92-D-4670 0015	08-04-1999 07-19-1999 00164 10 1	BNI T HEIRONIMUS SOUTHWEST DIVISION R SELBY	DRAFT - RESPONSIVENESS SUMMARY ASSOCIATED WITH DRAFT RECORD OF DECISION FOR OPERABLE UNIT 3, SITES 8, 11 AND 12 (REF A R #72)	ADMIN RECORD	COMMENTS LF ROD SOIL	11 12 8 OU 3	SOUTHWEST DIVISION NONE

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M60050 / 000112 NONE MISC NONE 0010	09-09-1999 08-12-1999 NONE 10.1	EL TORO MASTER DEVELOPMENT PRO M. LAPIN MCAS EL TORO D. GOULD	LOCAL REDEVELOPMENT AUTHORITY COMMENTS ON THE DRAFT RECORD OF DECISION FOR SITES 8, 11 AND 12 (REF. A.R. #72 & #406)	ADMIN RECORD	COMMENTS LF ROD SOIL	11 12 8 OU 3	SOUTHWEST DIVISION NONE
M60050 / 000143 CTO-0178/0076 RPT N68711-92-D-4670 2530	09-09-1999 09-07-1999 00178 03.4	BECHTEL NATIONAL INC T. HEIRONIMUS VARIOUS AGENCIES	DRAFT - PHASE II REMEDIAL INVESTIGATION REPORT, ATTACHMENTS O AND P, FOR OPERABLE UNIT 3B, SITES 7 AND 14 (INCLUDES REPLACEMENT COVER PAGES FOR VOLS II & III, DATED MARCH 2000 - CTO 0178/0107-2) (REF. #331, #358)	ADMIN RECORD INFO REPOSITORY	METALS RI SOIL VOC	14 7 OU 3B	SOUTHWEST DIVISION NONE
M60050 / 000358 NONE LTR NONE 0009	04-13-2000 11-04-1999 NONE	U.S EPA, SAN FRANCISCO, CA G. KISTNER NAVFAC - SOUTHWEST DIVISION D. GOULD	COMMENTS ON DRAFT PHASE II REMEDIAL INVESTIGATION REPORT, ATTACHMENTS O AND P DATED 9/7/99 (WITH ATTACHMENT) (REPORT DATED 9/7/99 CAN BE REFERENCED AT REF. #143)	ADMIN RECORD INFO REPOSITORY	COMMENTS COPC GW HHRA OU PAH PESTICIDES PRG RI SVOC VOC	14 17 2 3 5 7 OU 2B OU 2C OU 3A OU 3B	SOUTHWEST DIVISION
M60050 / 000363 NONE LTR NONE 0003	04-14-2000 11-08-1999 NONE	DTSC, CYPRESS, CA A. GIMENO NAVFAC - SOUTHWEST DIVISION D. GOULD	REVIEW OF DRAFT PHASE II REMEDIAL INVESTIGATION REPORT (RI), ATTACHMENTS O AND P VOLUMES I-III DATED SEPTEMBER 1999	ADMIN RECORD	COMMENTS OU RI	14 7 OU 3B	SOUTHWEST DIVISION

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M60050 / 000233 NONE PLAN NONE 0090	12-27-1999 12-14-1999 NONE 03.3	MCAS EL TORO BCT VARIOUS AGENCIES	DRAFT - BASE REALIGNMENT AND CLOSURE BUSINESS PLAN (REFERENCE AR #296 COMMENTS ON DRAFT BRAC BUSINESS PLAN; AR #311 - FINAL BRAC BUSINESS PLAN; AR #313 RESPONSE TO COMMENTS ON DRAFT BRAC BUSINESS PLAN)	ADMIN RECORD	BCT BRAC CLOSURE	1 10 11 12 13 14 15 16 17 18 19 2 20 21 22 24 25 3 4 5 6 7 8 9	SOUTHWEST DIVISION NONE

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M60050 / 000273 NONE LTR NONE 0006	03-15-2000 12-15-1999 NONE	NAVFAC - SOUTHWEST DIVISION D. GOULD RAB, COMMITTEE CHAIRMAN G. HURLEY	RESPONSE TO RESTORATION ADVISORY BOARD (RAB) COMMITTEE CHAIRMAN COMMENTS DATED 11/2/99, TO THE BASE REALIGNMENT AND CLOSURE (BRAC) PLAN (REFERENCE AR #377 - COMMENTS BY TECHNICAL REVIEW COMMITTEE & AR #2392 BRAC CLEANUP PLAN)	ADMIN RECORD INFO REPOSITORY	APHO BCP COMMENTS HRA IRP RFA TRC UST	1 10 11 12 13 14 15 16 17 18 19 2 20 21 22 24 25 3 4 5 6 7 8 9	SOUTHWEST DIVISION
M60050 / 000265 SWDIV SER 06CC.KF/0780 LTR NONE 0020	03-09-2000 12-21-1999 NONE	NAVFAC - SOUTHWEST DIVISION D. SAKAMOTO DTSC, CYPRESS, CA J. SCANDURA	LAND USE COVENANT AGREEMENTS AND RECORDS OF DECISION (RODS). (WITH ENCLOSURES) - (RESPONSE TO 12/21/99 LETTER TO DTSC CAN BE REFERENCED AT REF. #349)	ADMIN RECORD INFO REPOSITORY	LANDFILL LUC ROD	17 2 3 5 OU 2-B OU 2-C OU 3	SOUTHWEST DIVISION

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M60050 / 001809 MISC NONE 0001	03-21-1997 01-01-2000 NONE 10.1	ORANGE CO HEALTH	RESPONSE TO COUNTY OF ORANGE HEALTH CARE AGENCY COMMENTS OF MARCH 14, 1988 ON THE VERIFICATION STEP PLAN OF ACTION FOR CONFIRMATION STUDY (REF.DOC#001808)	ADMIN RECORD	COMMENTS GW RESPONSE TECH/GUID DOC. WELLS	00001 00005 00007	SOUTHWEST DIVISION NONE
M60050 / 000276 NONE LTR NONE 0015	03-20-2000 01-04-2000 NONE	NAVFAC - SOUTHWEST DIVISION D. GOULD VARIOUS AGENCIES	FEDERAL FACILITY AGREEMENT (FFA) SCHEDULE - REQUEST A CHANGE TO THE APPENDIX A SCHEDULE FOR PRIMARY DOCUMENTS. (WITH ENCLOSURES) (RESPONSE FROM EPA & DTSC CAN BE REFERENCED AT REF. #269 & #415)	ADMIN RECORD	EOD FFA RI	1 OU 3	SOUTHWEST DIVISION
M60050 / 000269 NONE LTR NONE 0002	03-10-2000 01-11-2000 NONE	U.S. EPA, SAN FRANCISCO, CA G. KISTNER NAVFAC - SOUTHWEST DIVISION D. GOULD	RESPONSE TO JANUARY 4, 2000 FEDERAL FACILITY AGREEMENT (FFA) EXTENSION REQUEST. (NAVY EXTENSION REQUEST & RESPONSE CAN BE REFERENCED AT REF. #276 & #415)	ADMIN RECORD INFO REPOSITORY	FFA OU	1 OU 3	SOUTHWEST DIVISION
M60050 / 000415 NONE LTR NONE 0002	04-19-2000 01-11-2000 NONE	DTSC, CYPRESS, CA J. SCANDURA NAVFAC - SOUTHWEST DIVISION D. GOULD	RESPONSE TO JANUARY 4, 2000 FEDERAL FACILITY AGREEMENT (FFA) SCHEDULE EXTENSION REQUEST (REFERENCE #269 & #276)	ADMIN RECORD	FFA OU RI	1 OU 3	SOUTHWEST DIVISION
M60050 / 000283 NONE LTR NONE 0003	04-03-2000 01-14-2000 NONE	NAVFAC - SOUTHWEST DIVISION D. GOULD DTSC, CYPRESS, CA T. CHESNEY	REQUEST FOR APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS (ARARS). (WITH ENCLOSURE) {SEE AR #470 - RESPONSE FROM DTSC)	ADMIN RECORD INFO REPOSITORY	ARAR	16 OU 3	SOUTHWEST DIVISION

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M60050 / 000296 NONE LTR NONE 0006	04-04-2000 01-19-2000 NONE	COUNTY OF ORANGE, SANTA ANA CA M. LAPIN NAVFAC - SOUTHWEST DIVISION D. GOULD	COMMENTS ON THE DECEMBER 1999 DRAFT BASE REALIGNMENT AND CLOSURE BUSINESS PLAN (WITH ENCLOSURE) (REFERENCE AR #233 - DRAFT BRAC BUSINESS PLAN, AR #311 FINAL BRAC BUSINESS PLAN; AR #313 RESPONSE TO COMMENTS ON DRAFT BRAC BUSINESS PLAN)	ADMIN RECORD	BUSINESS PLAN	1 10 11 12 13 14 15 16 17 18 19 2 20 21 22 23 24 25 3 4 5 6 7 8 9	SOUTHWEST DIVISION

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M60050 / 000321 NONE LTR NONE 0004	04-10-2000 **01-24-2000** NONE	DTSC, CYPRESS, CA T. CHESNEY NAVFAC - SOUTHWEST DIVISION D. GOULD	REVIEW OF THE DRAFT BASE REALIGNMENT AND CLOSURE (BRAC) BUSINESS PLAN DATED DECEMBER 1999	ADMIN RECORD	BUSINESS PLAN COMMENTS OU PCB ROD	1 10 11 12 13 14 15 16 17 18 19 2 20 21 22 23 24 25 3 4 5 6 7 8 9 OU 2A OU 2B OU 3'	SOUTHWEST DIVISION
M60050 / 000260 NONE LTR NONE 0003	03-09-2000 **01-27-2000** NONE	DTSC, CYPRESS, CA T CHESNEY NAVFAC - SOUTHWEST DIVISION D GOULD	CONCURRENCE WITH NO FURTHER ACTION STATUS IN SUMMARY REPORT FOR SOLID WASTE MANAGEMENT UNIT (SWMU), FORMER TEMPORARY HAZARDOUS WASTE STORAGE AREA.	ADMIN RECORD INFO REPOSITORY	NFA RCRA RFA SWMU	7 SWMU 71	SOUTHWEST DIVISION

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M60050 / 000470 NONE GUID NONE 0018	06-30-2000 02-03-2000 NONE	DTSC - CTPRESS, CA. T. CHESNEY DTSC MAILING LIST VARIOUS	DEPARTMENT OF TOXIC SUBSTANCES CONTROL RESPONSE TO REQUEST FOR IDENTIFICATION OF APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS (ARARS) FOR REMEDIATION OF SOIL AND GROUNDWATER ASSOCIATED WITH THE CRASH CREW TRAINING PIT NO. 2 (SEE AR #283 - DON LTR)	ADMIN RECORD INFO REPOSITORY	ARAR BTEX CERCLA DCE FS GW RA SOIL SVOC TCE VOC	16 OU 3B	SOUTHWEST DIVISION
M60050 / 000329 CTO-0178/088 RPT N68711-92-D-4670 0510	04-10-2000 02-10-2000 00178	BECHTEL NATIONAL, INC. J. SCHOLFIELD NAVFAC - SOUTHWEST DIVISION	DRAFT PHASE II FEASIBILITY STUDY, CRASH CREW TRAINING PIT NO. 2 (INCLUDES TRANSMITTAL LETTERS TO VARIOUS REGULATORS) {SEE AR #487 - COMMENTS BY M. BROWN & ASSOCIATES}	ADMIN RECORD INFO REPOSITORY	FS OU PAH PCB PVC RI SVE SVOC TCA TCE TPE TPH VOC	16 OU 3	SOUTHWEST DIVISION
M60050 / 000390 NONE LTR NONE 0006	04-18-2000 02-17-2000 NONE	MASTER DEVLP PROG, SANTA ANA M. LAPIN DTSC, CYPRESS, CA T. CHESNEY	COMMENTS ON THE PROPOSED REMEDIATION OF SOIL AND GROUNDWATER (WITH ATTACHMENT)	ADMIN RECORD	ARAR COMMENTS DRINKING WATE GW LUFT OU	16 OU 3B	SOUTHWEST DIVISION

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M60050 / 000309 CTO-200/0044 PLAN N68711-92-D-4670 0009	04-06-2000 03-01-2000 00200	BECHTEL NATIONAL, INC. T. HEIRONIMUS NAVFAC - SOUTHWEST DIVISION	DRAFT PROPOSED PLAN FOR NO FURTHER ACTION (INCLUDES TRANSMITTAL LETTERS TO CRWQCB & US EPA) {SEE AR #446 & 493 - LETTER & DTSC COMMENTS}	ADMIN RECORD INFO REPOSITORY	NFA OU PAH SVOC TPH VOC	14 7 OU 3B	SOUTHWEST DIVISION

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M60050 / 000311 SW8053 PLAN N68711-93-D-1459 0190	04-06-2000 03-01-2000 DO 65	OHM REMEDIATION NAVFAC - SOUTHWEST DIVISION	BASE REALIGNMENT AND CLOSURE (BRAC) BUSINESS PLAN (REFERENCE AR #233 - DRAFT BRAC BUSINESS PLAN; AR #296 - COMMENTS ON DRAFT BRAC BUSINESS PLAN; AR #313 - RESPONSE TO COMMENTS ON DRAFT BRAC BUSINESS PLAN)	ADMIN RECORD	BRAC CLOSURE DISPOSAL FOSL HRA PCB PCE RCRA ROD SVE TCE UST VOC	1 10 11 12 13 14 15 16 17 18 19 2 20 21 22 24 25 3 4 5 6 7 8 9 BLDG. 656 BLDG. 791 BLDG. 83 BLDG. 839 BLDG. 873 OU 1 OU 2 OU 2A OU 2B OU 2C	SOUTHWEST DIVISION

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M60050 / 000477 NONE LTR NONE 0054	07-06-2000 03-02-2000 NONE	DTSC -CYPRESS, CA. T. CHESNEY NAVFAC - SOUTHWEST DIVISION D. GOULD	DEPARTMENT OF TOXIC SUBSTANCES CONTROL RESPONSE TO REQUEST FOR IDENTIFICATION OF APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS (ARARS) FOR REMEDIATION OF SOIL AND GROUNDWATER ASSOCIATED WITH THE CRASH CREW TRAINING PIT NO. 2 (SEE AR #283 - DON LTR)	ADMIN RECORD INFO REPOSITORY	ARAR BCP CANCER FS GW HW LF SOIL VOC WATER	16 OU 3B	SOUTHWEST DIVISION
M60050 / 000331 CTO-0178/0107 RPT N68711-92-D-4670 0380	04-12-2000 03-07-2000 00178	BECHTEL NATIONAL INC. J. SCHOLFIELD NAVFAC - SOUTHWEST DIVISION R. SELBY	FINAL PHASE II REMEDIAL INVESTIGATION REPORT ATTACHMENTS O & P (VOLS II & III, WHICH WERE NOT REVISED AND SHOULD BE CONSIDERED "FINAL" AS OF 3/7/00, CAN BE LOCATED AT AR # 000143; INCLUDES TRANSMITAL LETTERS TO DTSC, CRWQCB, & US EPA)	ADMIN RECORD INFO REPOSITORY	AOC BCT DDD DDE DDT DQO FS IRP PAH PCB PRG RCRA RFA RI SOW SVOC SWMU TPH TRPH VOC	14 24 25 7 BLDG. 295 BLDG. 296 BLDG. 297 OU 3B	SOUTHWEST DIVISION

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M60050 / 000446 SWDIV SER 06CC.DG/159 LTR NONE 0002	04-27-2000 03-08-2000 NONE	NAVFAC - SOUTHWEST DIVISION D. GOULD VARIOUS AGENCIES	DRAFT PROPOSED PLAN DATED MARCH 2000 SENT TO REGULATORS FOR REVIEW AND COMMENTS {SEE AR #309 & 493 - DRAFT PROPOSED PLAN & DTSC COMMENTS}	ADMIN RECORD INFO REPOSITORY	OU PROPOSED PLAN	14 7 OU 3B	SOUTHWEST DIVISION
M60050 / 000487 NONE LTR NONE 0002	07-14-2000 04-14-2000 NONE	M. BROWN & ASSOCIATES M. BROWN NAVFAC - SOUTHWEST DIVISION D. GOULD	COMMENTS FROM MICHAEL S. BROWN & ASSOCIATES ON BEHALF OF THE CITY OF IRVINE ON THE DRAFT PHASE II FEASIBILITY STUDY (SEE AR #329 - DRAFT PHASE II FS)	ADMIN RECORD INFO REPOSITORY	DCA FS GW MW PCE SOIL TCA TCE WATER	16 OU 3	SOUTHWEST DIVISION
M60050 / 000493 NONE LTR NONE 0007	07-24-2000 05-16-2000 NONE	DTSC, CYPRESS, CA T. CHESNEY NAVFAC - SOUTHWEST DIVISION D. GOULD	COMMENTS ON THE DRAFT PROPOSED PLAN DATED MARCH 2000 (WITH ENCLOSURE - ADDITIONAL COMMENTS FROM KIMBERLY FOREMAN PUBLIC PARTICIPATION SPECIALIST) {SEE AR #309 & 446 - DRAFT PROPOSED PLAN & LETTER}	ADMIN RECORD INFO REPOSITORY	COMMENTS PROPOSED PLAN	14 7 OU 3B	SOUTHWEST DIVISION

UIC No. / Rec. No. Doc. Control No. Record Type Contr /Guid. No. Approx. # Pages	Prc. Date Record Date CTO No. EPA Cat. #	Author Affil. Author Recipient Affil. Recipient	Subject	Classification	Keywords	Sites	Location Box No.
M60050 / 000450 CTO-0178/0141 PLAN N68711-92-D-4670 0300	06-26-2000 06-08-2000 00178	BECHTEL NATIONAL INC. S. BLANCHARD NAVFAC - SOUTHWEST DIVISION	DRAFT PHASE II WORK PLAN FOR THE MPE PILOT STUDY, CRASH CREW TRAINING PIT NO. 2 (INCLUDES TRANSMITTAL LETTERS TO VARIOUS REGULATORS; DCN# - SER 06CC.DG/444)	ADMIN RECORD INFO REPOSITORY	BCP BCT BRAC COC DCA DCE DMP DQO FS GW IDWMP JP-5 PAH PID PVC QAPP RI SOIL SOP SSHP SVE SVM SVOC TCE TPH VOA VOC WELLS	16 OU 3	SOUTHWEST DIVISION

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UIC No. / Rec. No. Doc. Control No. Record Type *Contr./Guid. No.* Approx. # Pages	Prc. Date Record Date *CTO No.* EPA Cat. #	Author Affil. Author Recipient Affil. Recipient	Subject	Classification	Keywords	Sites	Location Box No.
M60050 / 000479 CTO-200/0089 PLAN N68711-92-D-4670 0017	07-13-2000 **07-01-2000** 00200	BECHTEL NATIONAL INC. NAVFAC - SOUTHWEST DIVISION	DRAFT FINAL PROPOSED PLAN FOR OPERABLE UNIT (INCLUDES CONSOLIDATED RESPONSE TO COMMENTS ON DRAFT PROPOSED PLAN; COMMENTS FROM U.S. EPA & DTSC)	ADMIN RECORD INFO REPOSITORY	ARSENIC CANCER COMMENTS COPC ERA GW HERBICIDE METALS NFA PAH PESTICIDES PUBNOT RI ROD SOIL SVOC TPH TRPH VOC	14 7 BLDG 245 BLDG 246 BLDG 296 BLDG 297 OU 3	SOUTHWEST DIVISION
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M60050 / 000497 CTO-0178/0152 PLAN N68711-92-D-4670 0300	08-03-2000 07-17-2000 00178	BECHTEL NATIONAL, INC. S. BLANCHARD NAVFAC - SOUTHWEST DIVISION	FINAL PHASE II WORK PLAN FOR THE MPE PILOT STUDY, CRASH CREW TRAINING PIT NO. 2	ADMIN RECORD INFO REPOSITORY	DCA DCE DQO FS MPE PAH PVC SVE SVOC TCE TPH VGAC VOA VOC WORK PLAN	16 OU 3	SOUTHWEST DIVISION
M60050 / 000499 NONE LTR NONE 0002	08-07-2000 07-27-2000 NONE	DTSC - CYPRESS T. CHESHEY NAVFAC - SOUTHWEST DIVISION D. GOULD	DTSC REVIEW OF DRAFT FINAL PROPOSED PLAN FOR THE DROP TANK DRAINAGE AREA NO. 2 & THE BATTERY ACID DISPOSAL AREA DATED JULY 2000 WITH ASSOCIATED RESPONSE TO COMMENTS. DTSC CONCURS WITH THE RELEASE OF THE PROPOSED PLAN FOR PUBLIC COMMENT.	ADMIN RECORD	DISPOSAL IRP PROPOSED PLAN	14 7	SOUTHWEST DIVISION

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No Keywords

Sites=00007;00014;14;7;OU 3;OU 3B

ATTACHMENT B

TRANSCRIPT FROM PUBLIC MEETING

MARINE CORPS AIR STATION EL TORO

PROPOSED PLAN - NO FURTHER ACTION

OPERABLE UNIT 3, SITES 7 AND 14

DRAFT

ORIGINAL

FORMAL PRESENTATION/PUBLIC COMMENT

Wednesday, October 25, 2000

7:45 p.m.

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

Reported By: Jeanine Burgner, CSR No. 6653

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* * *

Wednesday, October 25, 2000

* * *

(The following comments were made on the record:)

MR. DEAN GOULD: Okay. If we could please begin to take our seats, we can go ahead and get started with the formal portion.

Good evening, everyone. This is the Public Meeting for the Proposed Plan for Operable Unit 3, Site 7 and 14, at Marine Corps Air Station El Toro. Tonight is the formal Public Meeting, which is part of the CERCLA process that we are bound to follow to make sure that all of the sites will that have been identified are addressed appropriately and closed out.

Let me just back up a little bit as far as this evening goes.

What you missed by not being here earlier were a panel of experts, and you can certainly see who's seated here, representatives from both regulatory agencies; we have a number of contractual representatives, as well; we have a toxicologist; we

1 have remedial experts. We have just about everything
2 you could possibly hope for to address any questions you
3 might have on the site. And while it is certainly not
4 too late to have questions responded to, the beginning
5 hour or so is certainly a very good time to have your
6 questions posed to any of these panel of experts.
7 As you can see, the way the room is oriented,
8 we have general environmental information. And your
9 questions don't have to be specific to 7 to 14, although
10 I'll get into that in a second. And then, we have
11 remedial investigation with regards to 7 and 14 and risk
12 assessment and the Proposed Plan itself. As you can
13 see, with Sites 7 and 14, the table is going to stop
14 with the Proposed Plan. And we'll get into that a
15 little bit more.
16 But for these particular sites -- These two
17 sites are going to be proposed to you, the public, as no
18 further action sites. What that means is that over the
19 past few years, through our investigations, our research
20 and in cooperation with regulatory agencies, we have
21 reached the mutual conclusion that we feel no further
22 action will be required at these sites in order to have
23 them achieve the goals to make them safe for future use.
24 So that's certainly very, very encouraging news for
25 everybody.

What else are we going to cover tonight?

Well, I want to remind everybody here that this meeting is almost a midway point in the Proposed Plan public comment process. The Proposed Plan -- If you have not received a copy of it, there's a stack of them right up there on the table for your review. That is, by all means, for you to take home. If you need any, feel free.

Anybody that may not be on our mailing list, I encourage them to review it and provide written comments to us by November 8th. At that time, we'll consolidate the comments. We'll be responding to all of them. And anybody who would like to have a set of the responses to those comments, be sure we have your mailing address, as I suspected everybody here would do. But I can confirm that or anybody on the outside that may be getting this plan, make sure that they include their mailing address.

Tonight, what we'll be doing in this formal presentation, and then afterwards, we'll be sitting around, as we typically do for the RAB meetings, to respond to any questions that you might have. But I do want to say that the formal presentation, I will ask that you please hold on to your questions or, better yet, please write them down. There is a box for those

1 questions to be submitted. But what we'll be doing will
2 be to -- at the end of the formal presentation, you'll
3 be submitting your comment or question.
4 And as you can see, we have a Court Reporter
5 here, busily typing -- busily annotating everything
6 that's being said. So rest assured that the comments
7 made are officially recorded.
8 In as much as the meeting specifically for
9 Site 7 and 14, we do ask that you keep the comments
10 within that focus. If you have questions or concerns
11 about other sites or other areas of the Base, feel free
12 to ask them. We certainly have enough people, I think,
13 to at least get started on the questions. But do try to
14 keep your questions to 7 and 14 for the official portion
15 of this evening.
16 How did we get here tonight?
17 You can see the process. Site discovery, 7
18 and 14, investigation planning stages conducted in '92,
19 on to the RI, all the way up to last year. Right now,
20 through that investigation -- And I'm not going to get
21 into the technical side too much. That's why we have
22 the experts here on technical sides, to brief that to
23 you. But a determination has been made that no further
24 action will be required at these sites in order for them
25 to be available for unrestricted reuse down the road.

So comes the ROD. The reason it stops there, because there won't be a necessity for remedial action or remedial design.

We'll also be stopping at the HS, no further action.

So at this time, I think it will be an appropriate time for Content Arnold, the Lead Remedial Project Manager for Marine Corps El Toro and Tustin, to come up and begin the technical briefing to you.

MS. CONTENT ARNOLD: Thanks, Dean.

I'd like to start off first by showing you where the sites are tonight. We're talking about Sites 7 and 14. And Site 7 is located right here, and here's Site 14.

I'd also like to point out some other landmarks here. We do have the VOC plume that extends off station here, and also the VOC source area. Now, though the sites are located geographically above Sites 18 and 24, the sites of 18 and Site 7 and 14 did not contribute to the contamination at Sites 18 and 24. So, please, rest assured that these sites are recommended for no further action for both soil and groundwater. And the contamination of the groundwater for Sites 18 and 24 will be handled in the ROD for Sites 18 and 24.

1 Let's talk about Site 7.

2 Site 7 is the Drop Tank Drainage Area No. 2.
3 And as the name implies, it was used for aircraft drop
4 tank storage and drainage. The aircraft drop tanks were
5 drained and washed on the concrete apron at Units 1, 2
6 and 3. The mixture of residual fuel and wash water
7 drained off the edge of the concrete apron onto the
8 adjacent grassy areas.

9 Now, to as facilitate the investigation, the
10 site was divided up into five separate units.

11 And, Bob, could you put up that -- Thanks --
12 detail.

13 We have Unit 1 here, the northern pavement
14 area; Unit 2 the old east pavement area; Unit 3, over
15 here, the new east pavement area; Unit 4, the drainage
16 ditch; and Unit 5, the open dirt area, over here.

17 The chemicals of concern at the site were
18 VOCs, or volatile compounds, SVOCs, TPHs, metals,
19 pesticides and polynuclear aromatic hydrocarbons. In
20 total, the site is about 4.6 acres.

21 Site 14 is the Battery Acid Disposal Area.
22 And it was associated with operations at Building 245,
23 which is the heavy equipment maintenance shop.
24 Historically, this area was used to drain fluids from
25 batteries at the facility, vehicles, paints and

1 associated paint wastes.

2 Now, this site -- if you could put up the

3 detail -- was divided into two areas. We have the acid

4 disposal area here and, also, the catch basin right

5 here.

6 Chemicals of concern at this site will

7 included VOCs, SVOCs, TPH, metals, and pesticides. And

8 the site is approximately a half an acre.

9 Now, leading up to the RI, we did an initial

10 investigation effort. This included an aerial photo

11 survey, personal interviews and, also, an initial soil

12 gas survey.

13 Included, though, in the aerial survey -- the

14 purpose of that was really to identify staining,

15 location of tanks and flow of liquids.

16 The personal interview, we interviewed active

17 and retired personnel who had extensive knowledge of

18 what went on at these sites.

19 And the initial soil gas survey was conducted

20 in conjunction with the soil gas survey at Site 24.

21 So before we even went to the field, we took

22 all this information. We put together an RI work plan.

23 And that RI work plan was reviewed by, hopefully, some

24 of you folks, as well as the BCT. And that was approved

25 before we went to the field.

1 And the purpose of the RI was, one, to
2 identify what was at the site; and what was the extent
3 of any contamination at the site. And we just went over
4 what the chemicals of concern were. It was also to
5 determine if initial studies were needed to develop
6 cleanup options. From all this information we got, we
7 put together baseline risk assessment. And Dr. Temeshy
8 will be addressing that a little bit later this evening.
9 So, okay. What was done during the RI?
10 Well, what we did was we took a hundred and
11 forty-one soil samples from thirty-six locations. And
12 those locations, although a little bit difficult to see,
13 are noted here in the figure and, also, on your
14 handouts. The samples were taken at various depths,
15 from zero to ten feet. And I should mention the depth
16 to groundwater at the site is about a hundred twenty
17 feet below ground surface.
18 The conclusions from the remedial
19 investigation were generally, the chemicals of concern
20 were limited to very shallow soil. I'm talking from
21 zero to four feet below ground surface. And, also, the
22 concentrations were not very high. Polynuclear aromatic
23 hydrocarbons and metals were the most widely distributed
24 chemicals. PAHs are generally waste oils and
25 noncombustible fuels. These contaminants are not

1 readily mobilized and transported off-site.

2 And what that means is generally, the

3 chemicals like to absorb to the soil; so they're not

4 going to go anywhere. Because of these physical

5 characteristics, migration and transportation through

6 soil and ultimately to groundwater is negligible.

7 To summarize what we did at Site 14, we took

8 fourteen soil samples from seven locations. And depth

9 to groundwater at this site is approximately a hundred

10 fifteen feet below ground surface. Once again, the

11 results were also similar to Site 7. We found that the

12 chemicals of concern were generally limited to the upper

13 four feet of soil. The chemicals that were most widely

14 distributed at the site were SVOCs and metals.

15 And what semivolatile organic compounds are

16 is -- they're organic compounds. That means they

17 contain carbon. And these compounds evaporate slower

18 than volatile organic compounds. These chemicals are

19 not motile or transported off the site. Migration and

20 leaching through the soil to the groundwater is very

21 limited.

22 At this point, I'd like to hand off the

23 presentation to Dr. Temeshy. And she's going to be

24 talking about the Risk Assessment.

25 DR. ANDREA TEMESHY: Well, good evening. I see

1 some familiar faces. Don is an expert in my Risk
2 Assessment discussions. But I see some new faces, so
3 I'm going to go through three different issues
4 tonight.
5 The first thing is let me tell you why we do a
6 risk assessment. Secondly, it's a quick overview as to
7 how we do it. And, third, I'm going to show you what
8 results we got from performing the risk assessment on
9 Site 7 and 14.
10 And, basically, why we do a Risk Assessment is
11 it's a key component of the remedial investigation
12 process.
13 Secondly, it's the way for us to calculate,
14 estimate, what the risk is in association with exposure
15 to chemicals at Sites 7 and 14.
16 What we're trying to do is determine if
17 there's an adverse health effect from being exposed to
18 chemicals; in this case, the soils at site 7 and 14.
19 And what would take place after this is the
20 decision-makers would take a look at these results and
21 determine if there is a need for an action or not. So
22 that is how we're using the Risk Assessment results.
23 Can you all hear me okay?
24 Now, the next thing is how do we do this risk
25 assessment?

1 At Site 7 and 14, we did the remedial
2 investigation results. So the first thing is we're
3 going to looking at the analytical data of those
4 results. And we are going to be addressing the
5 concentrations of all the contaminants that were
6 detected at both sites. So that's the very first thing,
7 we determine the concentrations of all chemicals that
8 were identified at Sites 7 and 14. So that's the very
9 first step.
10 Secondly is we are addressing the risk to
11 human health. So what kind of exposure, who is exposed
12 to these contaminants?
13 And you can flip over to the next page.
14 Right.
15 And that is we want to figure out who is
16 exposed to -- potentially to these soil contaminants at
17 7 and 14. And what we are going to be addressing
18 tonight is hypothetical risks. And that is your most
19 conservative scenario.
20 And what if a person is exposed to the soil
21 contaminants, an individual, a hypothetical person had
22 a -- that has -- has a house on-site, right on top of
23 sites -- either one. So now, we've got somebody that is
24 living there, and a child, an adult. It's a
25 hypothetical situation. And we have a resident exposed

1 to these two sites.

2 Can we flip back to the first one?

3 Well, I'll -- It's hypothetical. I'll just

4 keep talking with this one.

5 This hypothetical resident is going to be

6 exposed to the soil.

7 And how is this exposure going to take place?

8 Well, we've got a person that could be

9 touching the soil -- So we'll have dermal contact; all

10 right? -- and/or incidental ingestion. So those are two

11 routes of exposure that we're going to be addressing in

12 this risk assessment.

13 There is another way of exposure, and that is

14 contaminants could be released from the soil to the

15 air. And that is wind, and then we'll have dust. So we

16 are going to also be analyzing what the exposure would

17 be for inhaling either vapors or dust. So now, we've

18 got this resident that is going to be exposed to soil

19 via all of these potential pathways.

20 Now, one more issue that I want to bring to

21 your attention is that we are going to -- in addressing

22 this residential -- hypothetical resident on-site, we

23 are going to be using defaults, exposure defaults that

24 are standard EPA defaults that are going to basically be

25 representing a residential scenario.

1 Now, what they imply is we've got somebody for
2 thirty years on-site. And what that means is this
3 person is going to be there twenty-four hours a day, for
4 thirty years. And what that implies is that that person
5 never leaves that house for thirty years. So there is a
6 tremendous amount of conservatism that is applied to
7 this residential scenario. And this is to assure that
8 the risk is never underestimated, but overestimated.
9 So, again, when we do a hypothetical resident,
10 please keep in mind that this is somebody that for a
11 period of thirty years never leaves that house. So
12 we've got somebody exposed to contaminants
13 twenty-four hours a day for those thirty years, never
14 goes to school, never goes to work. I want to have
15 that -- I want to be that person.
16 MR. DON ZWEIFEL: And, also, we're talking about a
17 dirty kid.
18 DR. ANDREA TEMESHY: Yes, this kid likes to roll
19 in the dirt, never takes a shower, never goes
20 shopping -- I don't want to be that person now.
21 Now, moving on to the next step, what we're
22 doing, now, with this information that we've presented
23 so far, we've got contaminants at both sites; and we
24 have the hypothetical scenario for a person, and a dirty
25 kid. And we're going to integrate these factors to

1 calculate risk.

2 And when we talk about risk, we're talking

3 about two end points. We're going to look at those

4 chemicals and address if they have the potential for

5 developing cancer. But there are other effects besides

6 cancer that could be in association with being exposed

7 to chemicals. And we are going to call those the

8 noncancer. And what that implies is anything from a

9 rash to a headache, to asthma, to any respiratory

10 distress, to liver damage.

11 So when we look at risk, we're looking at both

12 end points:

13 Would it have the potential for the

14 development of cancer?

15 Or could it have the potential to have other

16 side effects besides cancer that are noncancer-type

17 effects?

18 And we are going to be calling those hazard

19 index. Okay?

20 And, again, hazard index is in association

21 with the noncancer effects.

22 Now, what -- How do we measure this cancer

23 risk and noncancer risk?

24 We're going to use standard guidelines by the

25 regulatory agencies. And I'm going to be showing you

1 the results for both sites with respect to these
2 measures by regulatory agencies. And they're both for
3 cancer and noncancer.
4 And the very first row is the cancer effects.
5 This is the cancer risk. One -- Less than one
6 additional cancer case in a population of a million,
7 it's considered allowable. There is a risk range of one
8 additional cancer case, which is the middle row, in a
9 population of ten thousand, to one case in a population
10 of one million. And that is what is generally allowed.
11 And that is when other factors are taken into
12 consideration besides just the risk result.
13 And one of the reasons is because of what I
14 just went through earlier. And that is we are never
15 underestimating the risk, but we are basically
16 overestimating by assuming that this person doesn't
17 leave the house for thirty years and he's exposed to it
18 twenty-four hours a day.
19 Plus, there are other factors for that
20 particular site to take into consideration when making a
21 decision for action versus no action.
22 Then, what is considered unacceptable is if
23 it's one additional cancer case in a population of ten
24 thousand.
25 So we've got the three different things that

1 we're looking at when we are discussing the result in
2 association with the cancer end point:
3 And that is less than one additional cancer
4 case in one million; then, we have that range of one in
5 a million to one in ten thousand; and the greater than
6 ten thousand is not acceptable.
7 And I'll go through these in a diagram.
8 Now, for the noncancer effects, it's a little
9 simpler. We have one point only. And that is if we
10 have a noncancer risk of one or less, it's considered
11 acceptable. That is, the likelihood of developing a
12 noncancer effect is going to be low. If it's greater
13 than one, the measure of one indicates that toxicity
14 could, in effect, be developed. And it could be, again,
15 anything from a rash to some sort of damage to any other
16 part of the body, depending on what target that
17 particular chemical would be affecting.
18 So for the noncancer effects, we have the one
19 as the measure for the potential of toxicity to develop.
20 Okay. So these are the actual results for
21 both Sites 7 and 14.
22 If I go through this site first, these are
23 the -- this is the cancer risk for the hypothetical
24 resident. And this portion right here is the one in
25 less than a million. And that is the allowable range.

1 This is the generally allowable.
2 And this is the unacceptable.
3 And as you can see for both Sites 7 and 14, we
4 don't have -- none of the risks are in the unacceptable
5 zone. We've got risks that are in the generally
6 allowable or below, in the allowable range.
7 Now, each of these bars is the summation of
8 all the chemicals that were detected at these sites.
9 So for Site 7, Unit 5, this is the cancer
10 risk, the sum of all individual cancer risks for all of
11 the chemicals detected. There are three chemicals that
12 contribute to the majority of this bar.
13 And the same is true for all of this.
14 Now, the three chemicals are arsenic and two
15 of the PAHs, benzo(a)pyrene and dibenzo(a,h)pyrene.
16 And arsenic contributes to approximately half
17 of this bar in all of these cases. Now, these arsenic
18 levels are equivalent to the background levels. So
19 that's something that the decision-makers will have --
20 will take into consideration, which chemicals are
21 contributing to the bars and at what levels.
22 Again, we don't have any risks in the
23 unallowable area. They're all within the generally
24 allowable or the allowable risk range.
25 Now, for the end point that measures noncancer

1 effects for, again, a hypothetical residential scenario,
2 the measure of one -- which is at this bar right here,
3 one and greater -- has the likelihood of potential
4 adverse health effects. Below one, we don't have any of
5 that potential.
6 Site 7, Unit 1 measures at 1.4. So it's
7 slightly over one. And what's causing it to be 1.4,
8 half of this bar, is attributable to one metal; and that
9 is manganese.
10 Now, what I want to -- This is in the
11 Proposed Plan. And now, the risk assessment --
12 MR. DON ZWEIFEL: Do we have that?
13 DR. ANDREA TEMESHY: It's actually in the plan,
14 and it's also on the board.
15 And what this shows -- I know it's a very busy
16 table, but it's a presentation -- or, it's a summary of
17 the results I showed on the diagram.
18 But I want to leave you with this: The risk
19 results for the individual sites on the units were then
20 taken into consideration with other factors and to make
21 the decision of the recommended action of no further
22 action. And these are some of the considerations.
23 And I'm going to use Site 7, Uni 1 as an
24 example. And that is we've got just a few risk
25 drivers. We've got arsenic and PAHs for the cancer risk

1 and manganese for the hazard index.

2 Now, there was no site-related activity that

3 involved the use of the metals, either arsenic or

4 manganese. And as I mentioned before, these two metals

5 were within background. And in addition, as Content

6 mentioned earlier, the PAHs are low concentrations and

7 they're not going to be migrating on-site. So this is

8 part of the information that the regulators and the Navy

9 used in order to have the decision of no further action.

10 I'm going to then pass it to Content to

11 discuss some of the other factors that are used in the

12 no further action.

13 MR. DON ZWEIFEL: I have a question here, real

14 quick. Could I?

15 You're not going to restrict me; are you?

16 MR. DEAN GOULD: Yes.

17 MS. CONTENT ARNOLD: Thanks.

18 Dr. Temeshy touched upon some of the factors

19 that we need to consider when making a risk management

20 decision. As she mentioned, there are some risks that

21 are in the generally allowable range.

22 So what do we look at once we are within that

23 range?

24 Well, the BCT and the Navy carefully evaluate

25 the type, location and concentrations of the chemicals.

1 The types that we've discussed earlier are PAHs, metals,
2 and semivolatile organic compounds. Also, we look at
3 the nature of the contamination: Is it manmade, or is
4 it naturally occurring?
5 As we've also discussed tonight, some of the
6 risk drivers were naturally occurring. We've discussed
7 both the arsenic and the manganese. Additionally, we
8 look at the potential for off-site movement or
9 migration.
10 We've also noted tonight that a lot of these
11 chemicals have a tendency -- because of their physical
12 properties, have a tendency to stay in place and absorb
13 to the soil particles.
14 We also look at the natural degradation of
15 certain chemicals in the environment over time: Will
16 these chemicals break down, essentially?
17 Additionally, we look at the quality of data.
18 And as I mentioned before, before we even go out into
19 the field, we always have a work plan. And this work
20 plan is not only reviewed by the Navy, but also the BCT.
21 And, also, you folks have reviewed some of these work
22 plans.
23 In this case, we did a residential risk
24 scenario, to be very conservative. And, also, we look
25 at the results from the conservative risk assessment, as

I just mentioned.

So to summarize, the BCT -- And, remember: That includes the Navy, Marine Corps, U.S. EPA, DTSC, and the Regional Water Quality Control Board -- have concluded no further action; that is, for both soil and groundwater at Sites 7 and 14.

And, please, remember that the groundwater underneath these sites will be taken care of in the ROD for Sites 18 and 24 and are recommended for no further action. That is the environmental data for both what's at the site and where it is at the site.

Additionally, Sites 7 and 14 are protective of human health and the environment.

So, once again, just to let you know where we are in the process, we are at the Proposed Plan stage. We are announcing to the public our recommendation for no further action at Sites 7 and 14.

Any comments received here this evening, as well as until November 8th, will be provided in the responsiveness summary of the ROD. So I invite you all to comment tonight, or send us comments, or fax them to Dean before November 8th.

Before we start the public comment period, though, I'll pass it off to Dean.

MR. DEAN GOULD: Just a couple more quick orders

of business before we get into the comment session.

I just wanted to ask if anyone wants to provide comments on behalf of the agencies. From EPA, Dr. Kistner, or, Dr. Paull, would you like to make any comment?

DR. JEFFREY PAULL: Actually, I'd welcome any questions.

MR. GLENN KISTNER: The only thing I have is the EPA fully supports the no further action recommendation for Sites 7 and 14.

MR. DEAN GOULD: And we also have Ms. Chesney here on behalf of DTSC.

MS. TRISS CHESNEY: The DTSC concurs with the recommendation for no further action.

MR. DEAN GOULD: Let me make a couple more statements, and then we'll get to the public comment section.

Why, Dean, do we have to be so formal about this?

Because this is the formal public comment portion, as the sign says. And I want to make light of that, but it's also semiserious. The comments we will receive tonight and up till the 8th are official comments. And those will be incorporated into our selection. And so, this public comment period is

actually a fairly serious matter.

And let me just put out a plea, if I could, for future public meetings. This is certainly not the last one; we're going to have a number of them down the road. And for those of you who are in the community here, I ask, on behalf of the BCT and the RAB in general, that you please invite as many folks as you can to attend these public meetings. It really is a critical step in the overall CERCLA process. Some of you folks are key players in the community here, so I encourage you to invite as many of your constituents as you can to the next Proposed Plan meeting.

Having said that, please keep in mind that we have an official Reporter here. If you could please state your name and then your comment, that way, we can be sure to align the comment with who you are. Because we are going to be responding to these very formally, just as we would if a regulatory agency were reviewing one of the documents and we have to provide a review back to them. And I think for all the folks here this evening, we do have your mailing address; so that should not be an issue.

Bob, do you see anybody who --

MR. ROBERT COLEMAN: No.

MR. DEAN GOULD: So if you'll please state your

1 name and your question and your comment.

2 DR. CHARLES BENNETT: Charles Bennett,

3 B-e-n-n-e-t-t.

4 My question is directed at Mr. Kistner. In a

5 gas station cleanup, where the soil was greater than ten

6 thousand parts per million, would that be -- would the

7 closure of that be dependent upon a risk assessment, as

8 we see here, or are there other criteria at play for

9 that kind of remediation?

10 Or either of our other people.

11 I'm using that as an example, because it's

12 really a California-driven thing, when you're talking

13 about closing gas stations. So it may not be as easily

14 answered by the --

15 MR. DEAN GOULD: Let me preface a couple things,

16 if I could.

17 One, what we're really doing is just gathering

18 questions here tonight. I would not expect to be

19 providing verbal responses to you. And the reason for

20 that is these questions -- As I mentioned, these are

21 formal comments that we're obtaining. And this will be

22 responded to, in kind, by formal process.

23 And I'll ask that you will focus on Sites 7

24 and 14 specifically.

25 DR. CHARLES BENNETT: The question would more to 7

1 and 14, but it was looking at criteria being used and
2 applied to 7 and 14 and comparing it to other sites that
3 might have similarities.
4 MR. DEAN GOULD: I believe we have that question
5 down.
6 DR. CHARLES BENNETT: And I have a second question
7 that would be directed to Dr. Temeshy. And that is:
8 How were the VOCs chosen, or selected?
9 MR. DEAN GOULD: Great. Thank you.
10 MR. JERRY WERNER: Jerry Werner.
11 Question is -- There's another obvious method
12 of ingestion. And this would be from a vegetable
13 garden, where the contaminants would get into the food
14 supply that a person would have. Has that been
15 considered in the risk assessment?
16 MR. DEAN GOULD: Okay. If there is to be
17 vegetables or some type of gardening done at these
18 sites, would the products in the gardening be
19 consumable.
20 MR. JERRY WERNER: Yeah.
21 MR. DEAN GOULD: I thank you.
22 Come on. Bring 'em on.
23 MR. DON ZWEIFEL: Well, I've got a comment to
24 make, just a clarification.
25 Let me read this, if I might. Now, this is

1 from the Proposed Plan.

2 MR. DEAN GOULD: Yes.

3 MR. DON ZWEIFEL: Okay. Now, please note this --

4 I'm quoting on Page 6, in the footnote:

5 "Over half of the risk associated with the

6 hazard index at Site 7, Unit 1 is attributed to

7 manganese and arsenic" --

8 Not just manganese, but "and arsenic."

9 Maybe it's a misprint, or something. But

10 that's what I read in here.

11 And, by the way, I disagree. I think -- If I

12 may say this, I think Chuck Bennett and I both disagree

13 that we do not concur that they are naturally

14 occurring. I imagine they are naturally occurring. But

15 we think there is a -- There has been additional

16 contamination over and above and beyond what is

17 naturally occurring in the soil sampling.

18 Anyway, it says:

19 -- "which are naturally occurring metals in

20 native soil on and off MCAS El Toro property, and are

21 not associated with past site activities."

22 I think we have to disagree with that,

23 respectfully. I believe we do have some evidence -- And

24 I believe you do, too -- that they are more -- that they

25 are not just -- Well, see: We don't know precisely know

1 the disposal effect.

2 I've talked to employees on the Base, on the

3 former Base. And they told me that they disposed of all

4 kinds of things in these landfills. And I'm talking

5 specifically about Site 7 and all the other sites.

6 There are many chemicals disposed of. And these

7 employees -- I can name you names -- that --

8 Millard Jackson. He was the -- worked in the physical

9 plant. Remember that name. He told me where the -- As

10 you probably heard this before, Dean, forgive me. There

11 was -- If you remember, they would have the annual IG

12 inspections. They would bury a lot of chemicals and

13 other items. Because if they did -- If they had them

14 during the inspection, that means that they wouldn't --

15 Let's say it's half full, a half-full barrel of arsenic,

16 let's say, for instance. Then, they would have to

17 dispose of that, or else they wouldn't get it the next

18 time around. There are annual appropriations.

19 That's the problem, you see. So what I'm

20 saying tonight, just before maybe a week or two before

21 the actual IG inspection, they would go -- every year,

22 they would do this. Millard Jackson was on this Base

23 for many years. Now, you know it and I know it. That

24 happened.

25 MR. DEAN GOULD: I think we have the intent of

1 your question here.

2 Let me just comment: To our knowledge, we

3 don't believe these were the sites.

4 Let me just ask one question to you, and that

5 would respond to your statement.

6 You mentioned you had evidence.

7 Could you site any references?

8 MR. DON ZWEIFEL: No.

9 I'm only saying -- Nothing tangible, other

10 than -- The only thing tangible would be these employees

11 that would be -- My, God -- getting pretty old now. And

12 I don't even know if they can recollect a -- precisely

13 what was buried.

14 But there were quite a number of employees

15 that have worked on the Base over a period of time that

16 might have some type of recollection as to what was

17 buried in the Base. But it's a matter of were they

18 excavated and transported.

19 That is a good question. Thank you for asking

20 that, Dean. And I think that may be a viable question.

21 MR. DEAN GOULD: Do you know how to get in contact

22 with the one individual you did mention?

23 MR. DON ZWEIFEL: I don't even know if he's alive

24 anymore, to tell you the truth. I haven't seen him for

25 five, six years. My gosh, he'd be probably close to

1 eighty now. And, again, he was not in good health. So
2 I don't know. Like I said, his name is Millard Jackson.
3 He lives in Costa Mesa. He might still be alive. I
4 hope he is.
5 We lost one gentleman, a former master gunnery
6 sergeant that worked on the base, Chuck Randolph. And
7 he's no longer with us. Chuck would have -- I know
8 Chuck well. And that particular gunny would be very
9 helpful. Unfortunately, he can't testify anymore for us
10 on this subject.
11 MR. DEAN GOULD: Yes, Mr. Werner.
12 MR. JERRY WERNER: For the record, are you
13 contemplating any land use controls over the
14 restrictions of the use of property?
15 MR. DEAN GOULD: I am.
16 I'm tempted to answer your question, but in
17 keeping with our format --
18 MR. JERRY WERNER: Right. I understand your
19 probable answer, but let's get it down.
20 MR. DEAN GOULD: Yes, Marsha.
21 MS. MARCIA RUDOLPH: Okay. Marsha Rudolph.
22 Couple things:
23 No. 1, the two hazard index -- cancer risk and
24 noncancer risk, and hypothetical residential use, and
25 all, that it would be nice if the two tables would

1 compute together. I'm trying to find a relationship.
2 I'm not. Maybe I'm looking at the wrong thing.
3 No. 2, I note that in the notes to index,
4 noncancer risk for Site 14 -- or, basically, for both of
5 them, I guess, it states that manganese and arsenic are
6 attributed to being naturally-occurring metals in soil
7 on and off Base.
8 Where was the assessment done off Base?
9 I thought the Navy didn't do any assessments
10 off Base.
11 And the third point: On your on-site exposure
12 risk table, it says that the contaminants in the soil
13 did not extend to groundwater.
14 Is that specific to this site, or is that a
15 general observation?
16 If it's a general observation -- Excuse me?
17 I think -- Whatever.
18 MR. DEAN GOULD: I was going to comment: Very
19 good questions. Thank you. I appreciate it.
20 MR. MICHAEL BROWN: Michael Brown.
21 Couple questions:
22 One, what about, in particular, the arsenic
23 issue?
24 And where is the comparison with the off-site
25 concentrations of arsenic?

1 Are those, in particular, agricultural sites?
2 Arsenic was used very commonly prior to
3 World War II as a pesticide, particularly in this area,
4 particularly in citrus use -- orchards.
5 Also, given that you do have risks greater
6 than one in a million, does that trigger a Prop 65
7 warning?
8 And would that require the Navy to extend a
9 warning to -- upon transfer, under Prop 65?
10 MR. DEAN GOULD: Very good. Thank you.
11 DR. CHARLES BENNETT: I'm waiting for everyone
12 else to have the chance.
13 MR. DEAN GOULD: Short of Dr. Bennett, are there
14 any other questions or comments?
15 MR. DON ZWEIFEL: Yes.
16 In regards to the arsenic that was utilized on
17 citrus orchards and fields -- Well, see: We have to
18 have farmers. And as you know, this Base wasn't built
19 till 1943. Now, maybe, perhaps -- I don't know how long
20 we've had -- Now, here's a good question: How long have
21 we had tenant farmers on the Base; since 1943, when the
22 Base was built?
23 And how long has arsenic, how long was arsenic
24 utilized for agricultural uses.
25 Now, the thing is, here's a great way for

1 Southwest Div. to get off the hook. And it may be
2 Irvine Company in particular; maybe they're culpable.
3 I've said this for years, you know, that -- Dean, and
4 others in this room -- The Irvine Company could be alive
5 on this, could be guilty.
6 And also, your tenant farmers, if they've used
7 arsenic agriculturally, then, by God, this could be a
8 contributing factor. Then, Southwest Div. is not
9 culpable, unless you did not monitor your tenant farmers
10 in their insecticides, fungicides, herbicides that they
11 put down.
12 Maybe the Department of Navy is culpable. You
13 know -- I mean, you have to consider somebody's got to
14 be culpable.
15 Thank you.
16 MS. MARCIA RUDOLPH: One more. Then -- When I'm
17 looking at the overmap that was given, sort of risk
18 management. I'm looking at Site 7. And it states --
19 Since I didn't have the document, and I just -- it's not
20 an intelligent question.
21 It mentions a drainage ditch.
22 Is this drainage ditch one that would be
23 connected to one of the washes that was Site 25, no
24 further action? Or is there a relationship between
25 those?

1 I mean, I see drainage, I think -- Then, we
2 think of solvent studies. But I won't even go there.
3 But I'm concerned about drainage ditch. And
4 is this close to Agua Chinon?
5 I mean, it seems consistent that you can have
6 no further action in drainage ditch and no further
7 action here.
8 Is that where this is, or am I seeing it in
9 the wrong place?
10 MR. DEAN GOULD: I'm sure we can clarify that.
11 Mr. Werner.
12 MR. JERRY WERNER: With respect to the issue of
13 the Record of Decision that goes along with a no further
14 action, is that sort of the last step that needs to be
15 taken before property transfer, or are there some
16 additional steps beyond the Record of Decision?
17 MR. DEAN GOULD: Thank you.
18 MR. JERRY WERNER: You're welcome.
19 DR. CHARLES BENNETT: I have a comment I'd like to
20 make.
21 Charles Bennett.
22 In regards to my earlier questions with
23 VOCs -- This is not a question.
24 My concern is not for sins of commission; it's
25 for sins of omission.

1 And the concern is whether there have been
2 species that have been neglected, for one reason or
3 another. I'm quite confident that your risk assessment
4 is correctly done, soundly done, by standard methods,
5 particularly because they indicate that the manganese
6 and the arsenic are drivers. And my concern is there
7 may be other things that, for reasons I don't completely
8 understand why, are not included as potential
9 contaminants of concern, and the methods that were used
10 to say what's there and what was not there.
11 Specifically, my concern is in the analysis at
12 Site 7, at Unit 4 and at Unit 1, was adequate testing
13 done to determine the presence of other potential
14 contaminants of concern?
15 These would include, obviously, the
16 chlorinated solvents that could have been in those
17 areas. There were small amounts of samples that showed
18 these things present. And they -- I do not know whether
19 they were put into the computation for the risk
20 assessment or not.
21 So, that is my comment.
22 MR. DEAN GOULD: Very good.
23 Any others?
24 MR. DON ZWEIFEL: I have one. Yeah.
25 Again, Don Zweifel.

1 Chuck Bennett just pointed out to me, a minute
2 ago, that in regards to Site 7 -- evidently Unit 4, the
3 drainage ditch; the Unit 1, the north pavement; Unit 3,
4 the old -- new east pavement edge; Unit 4 -- Unit 5, the
5 open dirt area -- and, in particular, the Unit 4,
6 drainage ditch -- all dumped into the Agua Chinon Wash.
7 Now, the thing is, I believe -- It is my
8 opinion that there are contaminants in that wash. Now,
9 the thing is, of course, there have been many rains
10 since. And the chances are -- What I'm referring to is
11 the Upper Newport Bay. All of this contamination will
12 ultimately end up in Upper Newport Bay. Ultimately,
13 it's a fact.
14 I say that the Navy has an obligation to
15 examine -- In fact, I think I told you, Dean, earlier,
16 that I have a hydrographic survey of Upper Newport Bay
17 provided to me by the County that I would like to know
18 if you have. And if you do -- If you have that survey,
19 I won't -- But do you have it? Would you like to see
20 it?
21 MR. DEAN GOULD: We can have that.
22 MR. DON ZWEIFEL: All right. What I'm referring
23 to -- What I'd like to do is have the Department of the
24 Navy do some samplings of the soils, of the sludge in
25 Upper Newport Bay. And, hopefully, it's still there.

1 Of course, there's been a lot of tidal action -- my,
2 God -- over the years.
3 MR. DEAN GOULD: Keep in mind we're focusing on
4 Site 7 and 14.
5 MR. DON ZWEIFEL: Yes. I know.
6 What I'm saying is ultimately, the point
7 source contamination eventually will end up in Upper
8 Newport Bay, from the Marine Corps Station El Toro, from
9 Site 7 and other sites. The Borrego Canyon one, I
10 know.
11 What I'm saying is I believe -- And maybe I'm
12 a lone voice here. But I think that the Upper Newport
13 Bay needs to be sampled. Because ultimately -- You know
14 what I'm referring to, the City of Irvine.
15 MS. MARCIA RUDOLPH: Don, that's the Upper Newport
16 Bay water study. I agree with you.
17 I'm not sure if it belongs here. They don't
18 do off-site sampling anyway.
19 MR. DEAN GOULD: We'll respond to your question,
20 but it will be in the context of Site 7.
21 MR. DON ZWEIFEL: Okay. Thank you.
22 MR. DEAN GOULD: Any other questions during the
23 formal portion?
24 DR. CHARLES BENNETT: Following on with
25 Don Zweifel --

This is Charles Bennett.

I'm looking at specifically Unit 1 of Site 7. And the analysis on Table 4-2 of the RIFS -- or, appears to be RIFS, regarding TRPH analysis. TRPH is total recoverable hydrocarbons. And there were values on the surface of the drainage ditch of TRPH over three thousand part per million.

Now, what that indicates is that petroleum hydrocarbons went down the drainage ditch. And Don is absolutely right, the drainage ditch feeds into the Agua Chinon. So what the data shows, there are high hydrocarbons that could lead from Site 7 to Site 25, the drainage ditch.

But I'm supporting his position in that regard. Really, that's just a comment on the data at hand.

MR. DEAN GOULD: All right. Any more comments during the formal portion?

MR. DON ZWEIFEL: I may have one more.

You held us up on the Q-and-A part. During the dog-and-pony show, you couldn't do Q and A. You know you said that. Ladies and gentlemen, you know how I feel about this. Triss, you know how I feel, perhaps.

What I'm referring to specifically, if we can

1 ask questions during the presentation, then it jogs our
2 memory. We can make notes. Then, if we hold the
3 questions until after the dog-and-pony show is over,
4 then I forget to ask.
5 I do apologize to the Reporter. I probably
6 forgot some of the questions I was going to ask and,
7 thereby, make a statement in those questions.
8 MR. DEAN GOULD: Might I suggest you write those
9 questions down prior to the meeting or, perhaps, as we
10 go along.
11 MR. DON ZWEIFEL: It's hard for me to do that.I
12 think I'm a bit disabled in that regard.
13 DR. CHARLES BENNETT: My final comment -- And if
14 Don comes in again, I've got nothing left.
15 This Public Meeting is a step forward from the
16 previous Public Meeting. It's allowed a degree of
17 interaction that is an improvement on the past ones.
18 MR. DEAN GOULD: Very good.
19 MS. MARCIA RUDOLPH: Marsha Rudolph.
20 It was unclear -- Perhaps, this is something
21 you will actually answer -- what will happen to these
22 questions.
23 Are we going to get some kind of a document
24 that will tell us the answers, or are you just going to
25 have the Court Reporter list all the questions?

1 I think a lot of us, because we live in
2 California, are used to the sequel process, where those
3 answers are put someplace and they're required to be
4 there.
5 Will we see these answers before the document
6 is ROD'd?
7 MR. DEAN GOULD: Yes, I have to answer your
8 question, only because I already did. And that is when
9 I was speaking earlier, I mentioned that please make
10 sure that we have your addresses. I believe we do.
11 That's why we wanted to make clear your name prior to
12 your comment, because we will be glad to mail out a
13 complete set of responses to the comments from this
14 evening to all those that would like that. So anybody
15 who made specific comments, I think we can easily mail
16 those comments.
17 MS. MARCIA RUDOLPH: Before the ROD is filed.
18 MR. DEAN GOULD: Before the ROD is filed.
19 MS. MARCIA RUDOLPH: Thank you.
20 God, I actually got an answer. One for me.
21 MR. DEAN GOULD: Is that the last question?
22 MR. DON ZWEIFEL: No.
23 Content said something, by the way. And I was
24 concerned about it.
25 This is Don Zweifel here.

1 Having to do with my -- She said -- quote --
2 migration is very limited. And in regards to Site 14, I
3 believe --
4 Didn't you say the battery acid?
5 And I would be very concerned. I would like
6 to see -- I would like to see more proof that that
7 might -- that there hasn't been some vertical or
8 horizontal migration in regards to that.
9 Now, Content is saying there's very limited.
10 But what does "very limited" mean?
11 You didn't say. So maybe Content could
12 clarify.
13 What does "very limited" mean; a hundred feet,
14 a thousand feet, ten thousand feet, thirty thousand
15 feet?
16 I mean, the question is what is "very
17 limited."
18 And so, that really doesn't -- If you'll
19 forgive me, Content, I'd sure like to have a
20 clarification.
21 MR. DEAN GOULD: Very good question. Specific,
22 and related to 7 and 14. Thank you.
23 I can see research going on. If you suspect
24 there will be more questions, we can hold on a couple
25 minutes. Otherwise, we can close out the formal

1 portion.

2 I have to ask: Mr. Zweifel, any more formal

3 questions?

4 MR. DON ZWEIFEL: Content said one thing, by the

5 way. I have a quote from her in regards to factors

6 considered when making the risk management decision.

7 And maybe this goes to Dr. Temeshy, also, regarding

8 planned future uses -- quote -- potential -- The

9 potential residential risk scenarios will be

10 implemented. And I think that -- In other words, if --

11 I guess, the question is if we're going to have -- if

12 the risk assessment is going to be all over the Base or,

13 in particular, these particular sites will be for the

14 dirt-eating kid.

15 Is that what you're referring to? Is that

16 what you're attesting to? Is that correct?

17 MS. CONTENT ARNOLD: We can chat afterwards, if

18 you like.

19 MR. DEAN GOULD: You understand what his actual

20 question is, so we can respond to it formally?

21 MS. CONTENT ARNOLD: Yeah.

22 MR. DEAN GOULD: Okay.

23 MR. JERRY WERNER: One last one, I think.

24 What is the correlation between the chemical

25 levels in the soil and the concentration plugged?

1 I assume the ultimate question will tell the
2 effect on the mortality is related to the concentration
3 as measured in the blood sample.
4 Is there -- What's the correlation?
5 MR. DEAN GOULD: Okay. Thank you.
6 MR. MICHAEL BROWN: One more, just the issue of
7 lead at Site 14. And there's one significant hit
8 along -- a little over nine hundred milligrams -- or
9 kilograms, and whether or not that is a significant
10 level --
11 MR. DEAN GOULD: Can you site that?
12 MR. MICHAEL BROWN: It's Table 4.2 for Site 14.
13 DR. CHARLES BENNETT: Appendix B.
14 MR. MICHAEL BROWN: And in the context of lead --
15 Lead, in particular, is over background in just about
16 every sample taken. So even whether or not above the
17 action level, it appears that there's certainly
18 extensive lead contamination at that site.
19 And again, we were very curious, listening to
20 the presentation, that it was not considered to be a
21 risk driver, and particularly in the hazard index.
22 Again, lead, being a reproductive toxin, under
23 normal circumstances, would trigger a Prop 65 warning.
24 So I'm not clear why this isn't a significant
25 issue on your risk assessment.

1 MR. DEAN GOULD: Very good. Thank you.

2 DR. CHARLES BENNETT: Excellent question,

3 excellent.

4 MR. DON ZWEIFEL: I had one here regarding Site 7,

5 Unit 4, two additional cases of one million under cancer

6 risk residential scenario. It looks like -- There's a

7 statement here:

8 "The only risk driver present is one PAH,

9 benzo(a)pyrene. Benzo(a)pyrene is present in low

10 concentrations and is not mobile."

11 I don't -- I don't know how you can come to

12 the conclusion that it's not mobile.

13 I mean, it's assumed to nonmobile. It is

14 stationary. It cannot -- Is precipitation going to

15 cause mobility, downgrading? Is it going to cause a

16 horizontal? Is it going to hydraulic horizontally?

17 These are important questions.

18 MR. DEAN GOULD: I concur.

19 MR. DON ZWEIFEL: Thank you.

20 Ms. Rudolph? Anyone?

21 Well, that ends this formal portion of it.

22 And unless there's anyone else that wants to make a

23 comment, this wraps up this portion of the meeting.

24 Now, afterwards, for those who would like to

25 make additional comments, please feel free to sit with

1 the Reporter or either submit them in writing or submit
2 them verbally.
3 Any preference?
4 THE REPORTER: Whichever they prefer.
5 MR. DEAN GOULD: By all means, it's an excellent
6 opportunity to do so.
7 So with that, thank you for your attendance
8 this evening.
9 We have a lot of experts here. Take advantage
10 of their presence.
11 And, please, do encourage your constituents to
12 come to the next proposed meeting.
13 Thank you very much.
14
15 (The Formal Presentation/Public Comment
16 Meeting concluded at 8:55 p.m.)
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3 REPORTER'S CERTIFICATE
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5 THE UNDERSIGNED CERTIFIED SHORTHAND
6 REPORTER DOES HEREBY DECLARE:
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9 THE TIME AND PLACE THEREIN SET FORTH AND WAS RECORDED
10 STENOGRAPHICALLY BY ME AND WAS THEREAFTER TRANSCRIBED,
11 SAID TRANSCRIPT BEING A TRUE COPY OF MY STENOGRAPHIC
12 NOTES THEREOF.
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14
15 IN WITNESS WHEREOF, I HAVE SUBSCRIBED MY
16 NAME THIS DATE: NOV 0 9 2000.
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20 Jeanine Burgner
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MARINE CORPS AIR STATION EL TORO

PROPOSED PLAN - NO FURTHER ACTION

OPERABLE UNIT 3, SITES 7 AND 14

DRAFT

ORIGINAL

COMMENTS SUBMITTED TO REPORTER

Wednesday, October 25, 2000

9:00 p.m.

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

Reported By: Jeanine Burgner, CSR No. 6653

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I N D E X

COMMENTS BY:

MARCIA RUDOLPH
RAB Member / Lake Forest City Council
24922 Muirlands - Space 139
Lake Forest, California 92630
(949) 830-9816

1 * * *

2 Wednesday, October 25, 2000

3 * * *

4

5

6 (The following comments were made on the

7 record:)

8

9 MS. MARCIA RUDOLPH: The Navy has categorically

10 refused to do off-site background testing of

11 radionuclides. Yet, in the summary on Sites 7 and 14,

12 as I've seen tonight, the comment was made relative to

13 arsenic and manganese, that these are natural based upon

14 off-site numbers. The genesis of those numbers is not

15 given.

16 I believe it is incumbent upon the Navy to

17 provide the source for their opinion that the arsenic

18 and manganese, as seen in the numbers that they

19 generated for Site 7 and 14, are indeed consistent with

20 those numbers off-site, especially giving a map showing

21 location of those off-site sources that they are using

22 for their reference points.

23 I continue to be suspicious of the location of

24 Site 7 in relation to the Agua Chinon Wash, and the fact

25 that the Navy has -- had decided in 1997, on a no

further action for that site, along with the other two washes that come off the Base.

I continue to believe that a reexamination of Site 25 at the washes is prudent in light of TMDL and the issues of contamination runoff from MCAS El Toro.

(This concludes the Comments Submitted To Reporter.)

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12 NOTES THEREOF.
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16 NAME THIS DATE: NOV 0 9 2000.
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20 Jeanne Burgner
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RESPONSE TO COMMENTS
DRAFT RECORD OF DECISION
OPERABLE UNIT 3B NO ACTION SITES 7 AND 14
MCAS EL TORO, CALIFORNIA

April 2001

Originator: Glenn Kistner RPM U.S. EPA **To:** Dean Gould, BRAC Environmental Coordinator MCAS El Toro **Date:** 21 December 2000	**CLEAN II Program** **Contract No. N68-711-92-D-4670** **CTO-0164** **File Code: 02221**
SPECIFIC COMMENTS **The following are EPA's comments on the draft ROD for Sites 7 and 14.**	***RESPONSES TO SPECIFIC COMMENTS***
1. Our Branch Chief has requested that the text be added to explain tables 7-1 and 7-2. Since this is an NFA ROD, the more explanation of the risks the better. Specifically, the text should describe the risks associated with PAHs, including average concentrations (or equivalent) found or describe the EPCs for each unit. From a public perception viewpoint you can't have too much text describing these tables.	**RESPONSE 1:** Section 7.5 was expanded as requested. The EPCs for the chemicals that were risk drivers at each unit and the percent that they contribute to risk are shown in Tables 7-1 and 7-2 and referenced in the text as appropriate. Further, an additional section (Section 7.6) has been added to the ROD to address the basis for the risk management decisions made for Sites 7 and 14.
2. pg 1 of the declaration – the last few sentences have contamination and chemical interchanged, you should try to be consistent in their use.	**RESPONSE 2:** The word chemical in the last paragraph on page 1 of the Declaration was changed to contaminant to be consistent.
3. pg. 3-2 – Table 3-1. I'm not really sure of the relevancy or usefulness of this table. Do we really need it?	**RESPONSE 3:** The table was intended to reflect the dialogue that has occurred about Sites 7 and 14 between the public and the BCT at the RAB meetings. A similar table has been included in previous RODs for El Toro. However, DON has reviewed Table 3-1 based on U.S. EPA's comment and has determined that for these sites the information provided is not relevant. Therefore, the table has been removed from the ROD.
4. pg. 3-4, Table 3-2 – SVE design for which site or OU?	**RESPONSE 4:** The table was revised to indicate that the subject of Fact Sheet 8 was SVE design for Site 24.
5. pg. 5-12, top of the page – there is no mention of VOCs at Site 7. It would be helpful to readers to summarize the results of the soil gas survey conducted at this site.	**RESPONSE 5:** The DON has reviewed the discussion of the soil gas survey performed at Site 7 and has determined that this discussion should be removed from the ROD. The purpose of the soil gas survey was to determine the nature and extent of VOC contamination at Site 24. The survey included samples collected at Site 7 only because Site 7 is entirely included within the boundary of Site 24. Since the soil gas results were collected for the purpose of

Originator: Glenn Kistner RPM U.S. EPA **To:** Dean Gould, BRAC Environmental Coordinator MCAS El Toro **Date:** 21 December 2000	**CLEAN II Program** **Contract No. N68-711-92-D-4670** **CTO-0164** **File Code: 02221**
	delineating contamination at Site 24 and are presented in their entirety in the Site 24 RI, the DON does not believe that it is appropriate to also include them in the Site 7/14 ROD. Presenting the results of the soil gas sampling in this ROD would also be inconsistent with the way the soil gas investigation was handled in the earlier No Action ROD that included Sites 9, 10, and 22. These sites are also contained within Site 24. However, the No Action ROD that includes these sites does not present results of Site 24 soil gas sampling that occurred within the boundaries of these three sites.

RESPONSE TO COMMENTS
DRAFT RECORD OF DECISION
OPERABLE UNIT 3B NO ACTION SITES 7 AND 14
MCAS EL TORO, CALIFORNIA

April 2001

Originator: Triss M. Chesney, P.E., RPM Department of Toxic Substances Control **To:** Dean Gould, BRAC Environmental Coordinator MCAS El Toro **Date:** January 22, 2001	**CLEAN II Program** **Contract No. N68-711-92-D-4670** **CTO-0164** **File Code: 02221**
GENERAL COMMENT **The Department of Toxic Substances Control (DTSC) has received the above draft Record of Decision (ROD) for Operable Unit (OU) 3B, Installation Restoration Program (IRP) Sites 7 and 14, dated November 2000. The draft ROD presents the selected remedial action for Sites 7 and 14. Based on the results of the Remedial Investigation (RI) and human-health risk assessments, the Department of the Navy (DON) has determined that no remedial action is necessary to assure the protection of human health and the environment at Sites 7 and 14. The RI showed that site-related contamination is limited to the shallow soil interval (0 to 10 feet below ground surface). The human-health risk assessments show that the chemicals present in soil do not present an unacceptable risk to human health or the environment.** **Shallow groundwater underlying these sites is contaminated by volatile organic compounds (VOCs). The RI shows that this groundwater contamination does not originate from Site 7 or 14, but is associated with Site 24, the VOC Source Area. As a result, groundwater cleanup will be addressed in the Proposed Plan and ROD for Sites 18 and 24. The remedy may include use restrictions that prohibit drilling of wells and/or extraction of groundwater and allow access for groundwater monitoring and maintenance of equipment associated with groundwater remediation.**	*RESPONSE TO GENERAL COMMENT* **Response:** Please see response to specific comments below.
SPECIFIC COMMENTS **After review of the draft ROD, DTSC has the following comments:** **1. DTSC has not received a copy of the Responsiveness Summary that addresses comments submitted regarding the Proposed Plan. Upon receipt and review of the Responsiveness Summary, DTSC may have additional comments to the draft ROD.**	*RESPONSES TO SPECIFIC COMMENTS* **Response 1:** The DON submitted the draft Responsiveness Summary to the BCT, RAB, and LRA on January 31, 2001. A subsequent DTSC letter dated 29 March 2001 indicated that DTSC had no comments regarding the draft Responsiveness Summary and no additional comments on the draft ROD.
2. Section 1.3, Lead and Support Agencies, Page 1-1: The second paragraph states, "The primary support agency is the United States Environmental Protection Agency. . . "	**Response 2:** The paragraph was revised as suggested.

Originator: Triss M. Chesney, P.E., RPM Department of Toxic Substances Control **To:** Dean Gould, BRAC Environmental Coordinator MCAS El Toro **Date:** January 22, 2001	**CLEAN II Program** **Contract No. N68-711-92-D-4670** **CTO-0164** **File Code: 02221**
Revise this paragraph to clarify that the United States Environmental Protection Agency (EPA), DTSC and the Regional Water Quality Control Board (RWQCB) are regulatory agencies.	
3. Section 2, Site History and Enforcement Activities, Page 2-2: The second paragraph on the page states, "The BCT's (Base Realignment and Closure Cleanup Team's) mission is fast-track remediation of MCAS El Toro, to promote reuse and protect human health and the environment, by working cooperatively with the BCT, the community, and the shareholders." **Please revise "shareholders" to "stakeholders."**	**Response 3:** The word "shareholders" was changed to "stakeholders" as requested.
4. Section 2, Site History and Enforcement Activities, Page 2-3: The second to the last paragraph on the page states, "Subsequent to the Phase II RI, an evaluation of metals in groundwater was performed (BNI 1999a). The purpose of this evaluation was to determine whether the reported concentrations of metals in groundwater at MCAS El Toro reflect ambient conditions or are the result of historical Station activities." **The citation refers to the *Draft Final CERCLA [Comprehensive Environmental Response, Compensation and Liability Act] Groundwater Monitoring Plan, Marine Corps Station El Toro, California,* which does not include an evaluation of metals concentrations in groundwater. DTSC does not recall receiving a report regarding this evaluation. If this evaluation was conducted, please provide this office with additional information to locate the associated report. If this paragraph is in error, please revise the text as necessary.**	**Response 4:** The evaluation of metals in groundwater is presented as Attachment D to Appendix F (Volume II) of the Draft Final CERCLA Groundwater Monitoring Plan. The reference in the reference section has been clarified to indicate exactly where the evaluation is found. DON would be pleased to present DTSC with a copy of this document upon request.
5. Section 5.1.2, Surface Hydrology, Page 5-7: The last sentence in this section states, "The completion of the Orange County San Diego Creek Flood Control Master Plan is expected to alleviate the flood hazard by 2001 (SWDIV 1998)." **A reference for the citation, SWDIV 1998, is not included in Section 10, References, revise as necessary.**	**Response 5:** The statement is taken from the 1998 BRAC Cleanup Plan. However, in the process of responding to this comment, DON reviewed the sentence, determined that it did not add value to the section, and deleted the sentence and the reference to the Plan.

Originator: Triss M. Chesney, P.E., RPM Department of Toxic Substances Control **To:** Dean Gould, BRAC Environmental Coordinator MCAS El Toro **Date:** January 22, 2001	**CLEAN II Program** **Contract No. N68-711-92-D-4670** **CTO-0164** **File Code: 02221**
6. Section 5.2.3.1, RCRA [Resource Conservation and Recovery Act] Facilities Assessment: "The visual evaluation of both SWMUs [solid waste management units] during the Phase II RI fieldwork did not identify evidence of a surface release at either location (BNI 1997a). As a result, SWMUs/AOCs [areas of contamination] 71 and 72 are recommended for no further action." **DTSC received a summary report for SWMU 71 and concurred with the proposed no further action station since the area is located within the investigation boundaries of IRP Site 7. DTSC understands that the DON intends to submit a similar [recommendation] for SWMU 72. For clarification, provide this additional detail in the text.**	**Response 6:** It is DON's intention to sample SWMU/AOC 72 as an inactive temporary accumulation area and to submit a closure report to DTSC by calendar year 2002. This information has been added to Section 5.2.3.1.
7. Section 7.5, Risk Characterization Results, Page 7-10: The last bulleted item on the page states, Manganese was the largest contributor to noncancer risk." **The human-health risk assessment was included in the Final Phase II Remedial Investigation Report, Attachments O and P, Operable Unit-3B, Sites 7 and 14, Marine Corps Air Station El Toro, California (RI report), prepared by Bechtel National, Inc., dated March 2000. Page O6-58 of the RI report states, "For inhalation exposures the RfD [reference dose] values used have an additional uncertainty because they represent only the adult receptor. The inhalation RfDs were estimated from inhalation reference concentrations (RfC) by integrating the adult body weight and inhalation rate. The resultant adult RfD is also used to estimate the noncancer risk for a resident child. Use of an adult RfD overestimates the resultant hazard to a child. Hence, the uncertainty associated with the child's HI should be considered in risk management decisions." It is recommended that this information be incorporated in the discussion for manganese to further illustrate the conservative nature of the estimated hazard index value.**	**Response 7:** This information has been incorporated into Section 7.5 of the ROD as suggested. DON has also added a new section, Section 7.6, to discuss the basis for the risk management decisions made at Sites 7 and 14. The information was also added to Section 7.6.

RESPONSE TO COMMENTS
DRAFT RECORD OF DECISION
OPERABLE UNIT 3B NO ACTION SITES 7 AND 14
MCAS EL TORO, CALIFORNIA

April 2001

Originator: John Broderick California Regional Water Quality Control Board **To:** Dean Gould, BRAC Environmental Coordinator MCAS El Toro **Date:** February 16, 2001	**CLEAN II Program** **Contract No. N68-711-92-D-4670** **CTO-0164** **File Code: 02221**
SPECIFIC COMMENT	***RESPONSE TO SPECIFIC COMMENT***
We have completed our review of the above referenced document, dated November 2000, which we received on November 22, 2000. We have the following comments on the report: **5.2.3.8 SUMMARY OF PHASE I AND PHASE II RESULTS, *Unit 5, Open Dirt Area,* Page 5-16: Unit 5 Sample 07_GN1, a surface sample had a TRPH concentration of 32,091 mg/kg. Based on this analytical data, it is likely that a surface spill of petroleum hydrocarbon occurred in the area at some time in the past. A surface sample with TRPH of this concentration is considered a significant result, and represents a potential threat to surface water quality. The magnitude of this potential threat is dependent upon the area represented by this sample and the magnitude of the possible spill. We request that you investigate the area represented by this sample, and take appropriate remedial action on any surface spill delineated under your installation's petroleum release corrective action program.**	**RESPONSE:** As suggested, the location of sample 07_GN1 will be investigated further under the Petroleum Corrective Action Program. A statement to this effect has been added to the ROD. This will not impact the recommendation for no further (CERCLA) action for this site.

RESPONSE TO COMMENTS
DRAFT RECORD OF DECISION
OPERABLE UNIT 3B NO ACTION SITES 7 AND 14
MCAS EL TORO, CALIFORNIA

April 2001

Originator: Gary Simon, Executive Director MCAS El Toro Redevelopment Authority **To:** Dean Gould, BRAC Environmental Coordinator MCAS El Toro **Date:** January 19, 2001	**CLEAN II Program** **Contract No. N68-711-92-D-4670** **CTO-0164** **File Code: 02221**
GENERAL COMMENT	***RESPONSE TO GENERAL COMMENT***
In September of last year, the Department of Navy/United States Marine Corps ("DON/USMC") issued a Proposed Plan for remediation of Operable Unit 3B, Installation Restoration Program Site 7 (Tank Drop Drainage Area No. 2) and Site 14 (Battery Acid Disposal Area), at the former Marine Corps Air Station ("MCAS") El Toro. In the Proposed Plan, DON/USMC concluded that these sites did not pose a threat to human health or the environment and, accordingly, proposed no further action at these two sites. **This conclusion was based on a risk assessment which reportedly showed that excess cancer risks were less than 10^{-4}. Moreover, according to DON/USMC, the main contributors to this cancer risk were arsenic and polynuclear aromatic hydrocarbons ("PAHs"), the first of which purportedly did not result from its historical activities at the base and the second of which does not have a tendency to migrate in soils. In a similar vein, DON/USMC asserted that while non-cancer risks exceeded 1 at one of the areas of Site 7, the largest contributors to this risk were the naturally-occurring metals manganese and arsenic. Again, DON/USMC claimed that no site-related activities involved use of these metals.** **On November 8, 2000, the Orange County Local Redevelopment Authority ("LRA") transmitted to DON/USMC a written memorandum prepared by the LRA's technical consultant in which a number of issues and concerns regarding the Proposed Plan were raised. In particular, this memorandum raised serious concerns about DON/USMC's decision to (1) use a 10^{-4} risk level to evaluate the significance of cancer risks, and (2) not to remediate Site 7, despite the fact that the contamination present poses a non-cancer risk in excess of 1.0. In addition, the memorandum raised questions about the accuracy of and basis for DON's claim that the largest contributors to the cancer and non-cancer risks posed at Sites 7 and 14 are contaminants that did not come from any historical activities at the base.**	**RESPONSE 1:** The LRA's comment raises three concerns as follows: (1) DON's evaluation of risks at Sites 7 and 14; (2) DON's treatment of elevated levels of hydrocarbons and lead at Sites 7 and 14; and (3) DON's consideration of comments submitted by the LRA on the Proposed Plan for Sites 7 and 14. A detailed response to the first two concerns is provided in the Draft Responsiveness Summary that was transmitted to the BCT, RAB, and the LRA on January 31, 2001 and is not repeated here. In accordance with NCP regulations, all comments received during the public comment period are addressed in a document known as the Responsiveness Summary. The DON issued the Draft Responsiveness Summary for Sites 7 and 14 on January 31, 2001, to the BCT, RAB, and LRA. Once the Responsiveness Summary has been finalized, it will be issued as an integral part of the Draft Final Record of Decision (ROD). It is DON's practice to review all public comments on the Proposed Plan as they are received to determine whether the comments impact the proposed remedial alternative or modify recommendations made in the Proposed Plan. If this is the case, the ROD is not issued until the issues are resolved. In this case, the DON reviewed the public comments, including those of the LRA, and determined that they did not impact the selection of the preferred alternative. The rationale for this determination is provided in the Responsiveness Summary. The DON will not finalize the Draft ROD until all public and regulatory comments on the ROD and Responsiveness Summary have been considered, responses to these comments have been formulated, and the ROD and Responsiveness Summary have been revised as appropriate. Comments on the Draft ROD and Responsiveness Summary will be addressed by means of a Response to Comments matrix that will be issued at the same time as the Draft Final Record of Decision. This document is an example of such a matrix.

Originator: Gary Simon, Executive Director MCAS El Toro Redevelopment Authority **To:** Dean Gould, BRAC Environmental Coordinator MCAS El Toro **Date:** January 19, 2001	**CLEAN II Program** **Contract No. N68-711-92-D-4670** **CTO-0164** **File Code: 02221**
Finally, the memorandum also raised concerns about the high levels of total petroleum hydrocarbons and lead present at these sites, which were dismissed by DON/USMC in its analysis of proposed remedies for Sites 7 and 14. **On November 22, just two weeks after the close of the public comment period for the Proposed Plan, DON/USMC issued a Draft Record of Decision for Sites 7 and 14. Noticeably absent from the contents of the Draft ROD was any discussion of comments submitted by the LRA or other members of the public on the Proposed Plan. Rather, the Draft ROD simply noted that DON/USMC's response to these comments, i.e., the Responsiveness Summary, would be mailed under separate cover. Yet, to date, no such response has been provided to the LRA or to any other members of the public. Despite this, DON/USMC once again concludes in the Draft ROD that "no remedial action is necessary to assure the protection of human health and the environment at Sites 7 and 14."** **As DON/USMC is aware, National Contingency Plan regulations specifically require that the lead agency "[p]repare a written summary of significant comments, criticisms, and new relevant information submitted during the public comment period and the lead agency response to each issue." 40 C.F.R. § 300.430(f). Furthermore, these regulations require that the summary "be made available with the record of decision." Id. The reasons for these requirements is clear – only by providing such a summary can the public be assured that its comments, questions and concerns regarding a proposed plan for remediation of contamination have been taken into account by the lead agency.** **Here, it is clear that DON/USMC did not fully consider any of the comments that were submitted on the Proposed Plan. Indeed, DON/USMC issued the Draft ROD just two weeks following the close of the public comment period. Thus, it is not surprising that the Draft ROD contains all the same flaws and raises all the same concerns as the Proposed Plan.**	

Originator: Gary Simon, Executive Director MCAS El Toro Redevelopment Authority **To:** Dean Gould, BRAC Environmental Coordinator MCAS El Toro **Date:** January 19, 2001	**CLEAN II Program** **Contract No. N68-711-92-D-4670** **CTO-0164** **File Code: 02221**
The LRA is very concerned that DON/USMC has short-circuited the process for selecting an appropriate remedy at Sites 7 and 14. Any remedy selected by DON/USMC for these sites must [be] selected in light of, not in spite of the comments submitted by the LRA and other members of the public regarding the adequacy of that remedy. Accordingly, the LRA hereby re-submits its comments on concerning the Proposed Plan for Sites 7 and 14 as its comments on the Draft ROD for these two sites. Furthermore, the LRA requests that DON/USMC not take any action to finalize the Draft ROD for Sites 7 and 14 until it has fully responded to the comments submitted by the LRA and any other members of the public concerning the proposed remedy *and* the LRA and the public have had an opportunity to review such response.	

RESPONSE TO COMMENTS
RESPONSIVENESS SUMMARY ASSOCIATED WITH THE DRAFT RECORD OF DECISION
OPERABLE UNIT 3B NO ACTION SITES 7 AND 14
MCAS EL TORO, CALIFORNIA

April 2001

Originator: Nicole Moutoux, RPM U.S. EPA **To:** Dean Gould, BRAC Environmental Coordinator MCAS El Toro **Date:** 08 March 2001	**CLEAN II Program** **Contract No. N68-711-92-D-4670** **CTO-0164** **File Code: 02221**
SPECIFIC COMMENT **The following are the U.S. EPA's comments on the draft ROD for Sites 7 and 14.** **1. As we discussed last week, the following is my comment on the responsiveness summary for Sites 7 and 14. It applies throughout the RTCs as risk management is the subject of many of the responses. I suggest that in your risk management discussion, you also provide information regarding distribution of contaminants. I assume that the distribution of contaminants does not indicate any "hot spot" areas (i.e., elevated concentrations are found next to lower concentrations) and that this was also a factor in the Navy's decision for NFA. In addition, were there any calculations made using the highest measured concentration? This would also lend weight to the conservative nature of the risk assessment.**	***RESPONSE TO SPECIFIC COMMENT*** **RESPONSE 1:** A factor considered in the no action decision for Sites 7 and 14 was whether the distribution of contaminants at these sites indicated that the concentration of contaminants at one or more sample locations was significantly elevated over the remaining site concentrations (possibly representing a "hot spot"). The RI work plan included provisions for additional (step-out) sampling to evaluate areas with significantly elevated contaminant concentrations. However, the DON and the regulatory agency members of the BCT examined the data collected at the sites during the RI and did not identify any areas requiring further evaluation as hot spots. A discussion of the distribution of contaminants has been added to the risk management discussion in the response to Comment 1A of the Responsiveness Summary. In addition, DON has added a new section to the draft final ROD (Section 7.6) to discuss the basis of the risk management decision in greater detail. Section 7.6 includes a discussion of the distribution of contaminants. Tables 7-1 and 7-2 in the ROD highlight where the maximum concentrations were used as the exposure point concentration in the human health risk assessment. In addition, Section 7.5 has been revised to note cases where the maximum concentrations of chemicals were used to calculate risk.

RESPONSE TO COMMENTS
RESPONSIVENESS SUMMARY ASSOCIATED WITH THE DRAFT RECORD OF DECISION
OPERABLE UNIT 3B NO ACTION SITES 7 AND 14
MCAS EL TORO, CALIFORNIA

April 2001

Originator: Triss M. Chesney, P.E., RPM Department of Toxic Substances Control **To:** Dean Gould, BRAC Environmental Coordinator MCAS El Toro **Date:** March 29, 2001	**CLEAN II Program** **Contract No. N68-711-92-D-4670** **CTO-0164** **File Code: 02221**
GENERAL COMMENT	*RESPONSE TO GENERAL COMMENT*
The Department of Toxic Substances Control (DTSC) reviewed the above draft Responsiveness Summary for Sites 7 and 14, dated January 31, 2001. The document provides responses to comments on the Proposed Plan. The Proposed Plan provides the results of the environmental investigation of Sites 7 and 14, and explains the basis for the proposal for no further action at these sites. The Proposed Plan was released for public comment in September 2000. Subsequently, the Department of the Navy prepared the draft Responsiveness Summary to address the comments received during the public comment period. The Responsiveness Summary was forwarded separately from the draft Record of Decision (ROD) for Sites 7 and 14. The finalized Responsiveness Summary will be integrated into the draft final ROD for Sites 7 and 14. **DTSC does not have comments regarding the draft Responsiveness Summary or additional comments on the draft ROD.**	No response required. DON thanks DTSC for their timely review of the Responsiveness Summary.

RESPONSE TO COMMENTS
RESPONSIVENESS SUMMARY ASSOCIATED WITH THE DRAFT RECORD OF DECISION
OPERABLE UNIT 3B NO ACTION SITES 7 AND 14
MCAS EL TORO, CALIFORNIA

April 2001

Originator: **John Broderick** **California Regional Water Quality Control Board** **To:** **Dean Gould, BRAC Environmental Coordinator** **MCAS El Toro** **Date:** **March 22, 2001**	**CLEAN II Program** **Contract No. N68-711-92-D-4670** **CTO-0164** **File Code: 02221**
GENERAL COMMENT **The Regional Water Quality Control Board (RWQCB) representative indicated to Content Arnold, Lead RPM for MCAS El Toro, that RWQCB does not have any comments on this Responsiveness Summary.**	*RESPONSE TO GENERAL COMMENT* No response required. DON thanks RWQCB for their timely review of the Responsiveness Summary.

RESPONSE TO COMMENTS
DRAFT RESPONSIVENESS SUMMARY ASSOCIATED WITH THE RECORD OF DECISION
OPERABLE UNIT 3B NO ACTION SITES 7 AND 14
MCAS EL TORO, CALIFORNIA

April 2001

Originator: Gary Simon, Executive Director MCAS El Toro Redevelopment Authority **To:** Dean Gould, BRAC Environmental Coordinator MCAS El Toro **Date:** March 1, 2001	**CLEAN II Program** **Contract No. N68-711-92-D-4670** **CTO-0164** **File Code: 02221**
GENERAL COMMENT	***RESPONSE TO GENERAL COMMENT***
Last year, the Department of Navy/United States Marine Corps (DON/USMC) issued two documents: 1) Phase II Remedial Investigation Report, Attachments O and P, Operable Unit-3B, Sites 7 and 14 dated March 2000, and 2) Draft Proposed Plan for Operable Unit 3B, Sites 7 and 14 dated September 2000 for the former MCAS El Toro. **On November 8, 2000, the MCAS El Toro Local Redevelopment Authority (LRA) transmitted to DON/USMC a written Memorandum prepared by the LRA's technical consultant in which a number of issues were raised concerning the DON/USMC's proposed No Further Action at these Sites.** **In January of this year, DON/USMC issued a responsiveness summary to comments received from the LRA and the public. After reviewing the DON/USMC's responsiveness summary, we felt that we may have not been clear on some of the questions we raised in our November 8, 2000 letter. As such, the LRA's consultant prepared the attached Memorandum to clarify those questions and added a few questions regarding issues discussed in the DON/USMC's responsiveness summary. Obtaining a response to our questions will help us in planning the reuse of MCAS El Toro.**	**RESPONSE:** Please see the following pages for comments submitted by the LRA's technical consultant and the responses to these comments.

Originator: Bertrand S. Palmer, Ph.D., P.E., & Bob Demott, Ph.D. Geosyntec Consultants **To:** Polin Modanlou MCAS El Toro Master Development Program **Date:** March 1, 2001	**CLEAN II Program** **Contract No. N68-711-92-D-4670** **CTO-0164** **File Code: 02221**
GENERAL COMMENT	***RESPONSE TO GENERAL COMMENT***
Last year, the Department of Navy/United States Marine Corps (DON/USMC) issued two documents regarding Site 7, Drop Tank Drainage Area No. 2 and Site 14, Battery Acid Disposal Area. These two documents are the "Phase II Remedial Investigation Report, Attachments O and P, Operable Unit-3B, Sites 7 and 14 Marine Corps Air Station (MCAS), El Toro, California" (RI) dated March 2000, and the "Proposed Plan for Operable Unit 3B, Sites 7 and 14 at Marine Corps Air Station El Toro" (Proposed Plan), dated September 2000. The RI provides a summary of the nature and extent of contamination at Operable Unit (OU)-3B, Sites 7 and 14, and provides fate-and-transport and human health risk assessment for chemicals of potential concern at these sites. The RI also includes recommendations for future work and potential remediation at these sites. The Proposed Plan is a summary of the work performed in the RI and is designed to be given to the public for comments before publication of the Record of Decision (ROD). **The Local Redevelopment Authority (LRA) performed a review of the RI and the Proposed Plan and prepared written comments, which were provided to DON/USMC in a letter and a memorandum dated 8 November 2000.** **In response to the comments received from the LRA and the public, DON/USMC issued a Responsiveness Summary (RS). GeoSyntec Consultants (GeoSyntec) has performed a preliminary review of the RS. The purpose of this memorandum is to summarize GeoSyntec's comments, issues, and questions regarding the RS and to provide additional follow-up questions regarding the RI and the Proposed Plan.** **DISCUSSION** **Based on GeoSyntec's review of the RS, it appears that DON/USMC may not have completely understood some of the questions or issues raised by**	**RESPONSE:** Responses to specific clarifications and new comments provided by the LRA's technical consultant follow.

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the LRA in its letter and memorandum dated 8 November 2000. The purpose of this memorandum is to reformulate or clarify some of these questions. In addition, GeoSyntec has added a few questions regarding issues discussed in the RS. Obtaining a response to these questions will help the LRA in planning the reuse of MCAS El Toro. The following is a description of issues and questions identified by GeoSyntec.	
SPECIFIC COMMENTS **Response to Comments 2B** **In response to GeoSyntec's comment, DON/USMC indicates that the soil would effectively neutralize acid wastes disposed at Site 14 and, therefore, DON/USMC did not test the soil for pH. GeoSyntec is aware of the soil's general buffering ability. However, considering the substantial volume of battery acid (sulfuric acid) disposed at the site (210 gallons) (see RI at P1-2), the soil may have gradually lost its ability to neutralize the acid. This would have resulted in potentially low pH in the soil and increased mobility of other contaminants (such as metals) in the vadose zone and possibly the groundwater. Considering that a soil pH test is a very cost-effective manner to definitively determine whether soil buffering capability has been sufficient for the volume of waste discharged (less than $15/test), GeoSyntec believes that DON/USMC should have tested the soil, rather than speculate as to the potential for these soils to neutralize acid wastes. Such speculation increases the uncertainty in the risk characterization of the soils, weakening the Point-of-Departure evaluation provided by DON/USMC. Since DON/USMC must convince risk managers and potential future users of the protectiveness of their preferred remedial strategy through such a Point-of-Departure evaluation (i.e., the quantitative risk estimates in and of themselves do not rule out potential risks), readily available measurements should be incorporated instead of speculative hypothesis.**	***RESPONSES TO SPECIFIC COMMENTS*** **Response:** DON did not test the soil at Site 14 for pH. Such a test was considered unnecessary because of the buffering ability of the soil, because there was no evidence of stress in the vegetation present at the site during the Phase I or Phase II RIs, and because evaluation of the analytical results for metals samples collected during the Phase I RI did not indicate a distribution pattern consistent with increased mobility in shallow soil. In addition, the estimated volume of battery acid disposed at Site 14 was based on the conservative assumption that battery acid was drained annually from each of 30 vehicles supported by the heavy equipment maintenance shop operated out of nearby Building 245 (Initial Assessment Study of Marine Corps Air Station, El Toro, California, Brown and Caldwell, 1986). Further. the Initial Assessment Study notes that the battery acid may have been neutralized prior to disposal at Site 14. Therefore, the 210 gallons cited in the RI overestimate the magnitude and character of the disposed wastes. Regulatory agencies, including U.S. EPA, DTSC, and RWQCB reviewed the Phase I data and the Phase II Work Plan and concurred with DON's decision. The regulatory agencies also agreed with the findings for the point of departure evaluation presented in the risk assessment section of the Site 14 RI. As noted in DON's response to Comment 2B in the draft Responsiveness Summary, the DON groundwater analyses did include measurement of pH. The results indicated that groundwater pH is neutral (about 6.8 to 7.2). In addition, metals concentrations in soil and groundwater are consistent with background levels.

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Response to Comment 2C **DON/USMC's response to this comment does not adequately address the significant issues raised. In its response, DON/USMC confirms that sampling locations were randomly positioned at each site to produce an "unbiased configuration" of sampling locations. Thus, this sampling methodology does not target known chemical discharge points. Considering that DON/USMC has discharged chemicals at discrete points during operations at MCAS El Toro, DON/USMC should have sampled at locations that were known discharge points (directed sampling), in addition to randomly-selected locations. While random sampling is the correct approach for determining *overall* concentrations at a site, directed sampling is specifically required to characterize known discharge or disposal locations. This is significant to risk managers who want to know not only the risks over an entire area, but also whether certain locations ("hotspots") present a specific risk issue.**	**Response:** As noted in the DON response to Comment 2C in the draft Responsiveness Summary, the arrows labeled "acid disposal and paint waste area" in Attachment P Figures 3-1 and 4-7 refer to the entire area within the dashed blue lines and do not designate specific discrete locations at the tip of each arrow as Comment 2C and this clarification comment suggest. Since the entire area along the edge of the pavement south of Building 245 was reportedly used for waste disposal at Site 14, a random sampling approach was selected for the pavement edge area and the adjacent drainage ditch. The response to Comment 2C in the Responsiveness Summary has been revised to clarify the disposal location and expand on the discussion of the sampling approach.
Also, the use of overall site representations as exposure concentrations is only appropriate where the same types and levels of exposures are anticipated to occur across the entire site. In other words, random sampling of an area is applicable where exposure is anticipated to occur randomly across the same area. We do not believe that the overall (average) concentrations are sufficient to characterize all potential risks at Site 7 and 14 given the potential future uses of these sites. For example, a small park would be substantially smaller than the area that was randomly sampled. Accordingly, the overall concentration cannot be assumed to be representative for each potential lot. This is a well known issue in developing Conceptual Site Models that represent potential exposures at a site, and U.S. EPA guidance directs that similar spatial scales be considered between potential exposure areas and sampling locations. **Where a randomly sampled area is substantially larger than the area over which exposure is anticipated, a further level of analysis is required prior to accepting the overall concentrations as appropriate for evaluating**	DON did not use overall site representations as exposure concentrations. Instead, each site was subdivided into units to define smaller areas where the same types and levels of exposures were anticipated to occur. For example, Site 7 was subdivided into five units as follows: Unit 1 – North Pavement Edge, Unit 2 – Old East Pavement Edge, Unit 3 – New East Pavement Edge, Unit 4 – Drainage Ditch, and Unit 5 – Open Dirt Area. These units varied in size from about 0.34 to 2.07 acres and may be smaller or larger than a small park. The area of Site 14 is 5,520 square feet (0.13 acre). It should be noted at this point that the current anticipated use of Sites 7 and 14 is industrial, not a park (recreational). Regardless, human-health risks for the units at both sites were evaluated assuming residential use, the most conservative redevelopment scenario. Further, rather than using site-wide average concentrations of identified contaminants, reported contaminant concentrations for samples collected within each unit were assessed on a unit-specific basis and a reasonable maximum exposure concentration was developed for each unit-specific contaminant.

receptor risks. Such analysis can take the form of a statistical demonstration that the overall site concentrations are substantially homogeneous (i.e., that particular sub-areas with substantially higher concentrations are not anticipated). However, in our experience, where specific waste disposal locations have been identified, sampling and determination that these areas do not represent hotspots typically is required, in addition to the determination of the overall (average) concentration.	Within each unit at a site, the number of Phase II sampling locations (or the adequacy of the Phase I sample quantities) was based on human-health risks calculated using the analytical results from soil sampling performed during the Phase I RI, on the decision error limits set for the Phase II RI, and on the area encompassed by each site unit. This sampling strategy was designed to provide a high level of confidence (95 percent) that the appropriate number of samples was collected to determine the nature and extent of contamination and conduct a human-health risk assessment based on the most conservative (residential) use of each site unit. Sampling was conducted in conformance with these guidelines using a random sampling strategy. As noted earlier, random sampling was conducted because the review of historical records, information compiled from employee interviews, and visual inspections conducted at each site identified general areas (not discrete locations) throughout which disposal reportedly occurred (conditions particularly suitable for a random sampling approach.)
The risk estimates used by DON/USMC are based on average (specifically, 95% upper confidence limits of the mean) concentrations determined at randomly selected sampling locations. The inability of DON/USMC to identify localized areas (due to the lack of sampling) with potentially much higher concentrations (as suggested by their identification of specific disposal locations) is a substantial limitation with regard to determining actual human health risk and the appropriateness of future land uses at particular locations on a given IRP site. As an example, DON/USMC has not considered the highest soil lead concentration (931 mg/kg observed at Site 7 or 923 mg/kg observed at Site 14) as an indicator of the need for further evaluation or remediation. Dismissing such levels is premature in light of the uncertainty as to whether the lead concentrations in the specific locations where batteries were drained have been characterized. Presuming a reuse scenario where exposure of children to lead in soil would be most relevant, it is not the average concentration across several acres that is relevant, it is the potential concentration in a given area. There is inadequate delineation to confidently conclude that some	As noted in the first paragraph of the response to Comment 2C in this document, DON did not identify specific, discrete disposal locations within the units at either Site 7 or 14. Instead, the entire pavement edges at Site 7 Units 1 and 3 and at Site 14 were reportedly areas where waste disposal or runoff from waste disposal on the adjacent pavement occurred. These areas were randomly sampled to identify potential hot spots and gather data to be used in the human health risk assessment in accordance with the approved sampling plan. With regard to the specific comment raised by GeoSyntec, as explained in the response to Comment 2H in the draft Responsiveness Summary, the DON did not dismiss the highest lead concentrations at either Site 7 or 14, but considered all reported concentrations for each unit at both sites in accordance with U.S. EPA guidelines. Per U.S. EPA guidance, exposure is not evaluated on the basis of single samples because it is considered unrealistic to assume that a person would remain at the same exact location for the entire period of exposure (30 years). The accepted methodology is to assess exposure on the basis of estimates of the central tendency of the data set for each site unit rather

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particular area would not end up with lead levels in the 900 mg/kg range instead of the overall average range. In short, a more appropriate approach would include remediation of hotspots to reduce potential human health risk at Sites 7 and 14.	than on individual data points. In accordance with U.S. EPA Risk Assessment Guidance for Superfund (U.S. EPA 1989), the 95 percent upper confidence limit (UCL) of the mean measured concentrations for each site unit is used as the exposure point concentration (EPC). U.S. EPA specifies that the 95 percent UCL is to be used in risk assessments because of the uncertainty associated with any estimate of the exposure concentration based on a single sample value. The goal of this approach is to quantify the most intense level of exposure that may reasonably be expected to occur (i.e., reasonable maximum exposure). Furthermore, from a technical standpoint it is unrealistic to base potential exposures on the assumption that an adult or child would remain stationary for the 30-year duration of the residential risk scenario, spending the entire time at a single discrete location that represents the highest reported sample concentration within a site unit (i.e., the exposure scenario suggested in this comment). Per U.S. EPA, the realistic scenario used for the Sites 7 and 14 risk assessments assumes that adults and children will move throughout the unit area during that 30-year period and as a result, their potential exposure would represent an upperbound on the mean of the contaminant concentrations distributed throughout that area (i.e., 95 percent UCL). With regard to remediation of potential hot spots, the DON and the regulatory agency members of the BCT examined the data collected at Sites 7 and 14 during the RI and did not identify any areas requiring further evaluation as hot spots.

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Response to Comment 2D **GeoSyntec is aware of the differences between Total Petroleum Hydrocarbon (TPH) and Total Recoverable Petroleum Hydrocarbon (TRPH). GeoSyntec is also aware of the approach used by DON/USMC to base the need for site remediation solely on a human health risk-based assessment. However, GeoSyntec's comment still has not been addressed by DON/USMC and is further explained hereafter.** **TRPH and TPH (as diesel) concentrations measured at Site 7 are 32,091 mg/kg and 426 mg/kg, respectively (Sample No. 07_GN1 at 0-foot depth). This data indicates that Petroleum Hydrocarbon present at the site is likely to be fairly "heavy" (consistent with the fact that jet fuel and lubricating oil were discharged at the site). (DON/USMC indicates that this difference could be due to the presence of non-petroleum hydrocarbon. It is possible, but far from certain, at a site where 22,000 gallons of jet fuel and/or lubricating oil have been disposed). At Site 14, TPH concentrations (as diesel) exceed 11,000 ppm in a sediment sample collected in the catch basin.** **This data and the results of human health risk assessment do not mean that leaving the Petroleum Hydrocarbon in place at Site 7 or 14 is adequately protective of human health and the environment. On the contrary, Regulatory Action Levels typically used by the Orange County Health Care Agency (OCHCA) for clean-up of sites contaminated by heavy hydrocarbons ranges from 100 to 1000 PPM by Method 418.1 (i.e. TRPH). The existing TPH or TRPH concentrations at Site 7 and 14 are greater than action levels used in Orange County. Thus, Petroleum Hydrocarbon should be remediated by DON/USMC at Site 7 and 14.**	**Response:** In their comments on the draft ROD for Sites 7 and 14, the RWQCB requested that DON further investigate the concentration of TRPH reported at Site 7 surface sample location 07_GN1. DON has agreed to conduct this investigation under the Petroleum Corrective Action Program. This will not impact the no action status of Site 7 under CERCLA. The Site 14 catch basin sediment sample was collected during the Phase I RI. The concrete catch basin was inspected visually during the Phase II RI and no sediment was present at that time. Because risks at the Catch Basin were within the range considered allowable (based on Phase I data), sediment was not present in the Catch Basin at the time of the Phase II RI, and sampling at other Site 14 locations showed that TRPH and TPH in surface soil were either non-detect or present at low concentrations (and would therefore be unlikely to re-contaminate the catch basin in the future), the DON concluded that no further action was required for this unit. The responses to Comments 1F and 2D in the Responsiveness Summary have been revised to incorporate the information presented here.
Response to Comment 2E **DON/USMC states in the RI that arsenic is responsible for a large part (50 percent at Site 7 and 40 percent at Site 14) of the carcinogenic risks at Sites 7 and 14 (see RI at page O7-5 and P7-2). DON/USMC adds that the arsenic concentrations at Site 7 are not attributable to known historical**	**Response:** Please see the response to Comment 2C in this document for a discussion of the sampling strategy for Sites 7 and 14. Contaminants at both Sites 7 and 14 were reportedly disposed at or flowed off the entire length of the pavement edge at each unit during the duration of activities at these sites. The entire area adjacent to the pavement edge represents the specific location where

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site activities, and that Sites 7 and 14 may have background concentrations in the upper part of the range of statistically characterized background concentrations of arsenic for MCAS El Toro.

While this is one possible interpretation of the analytical results, additional information and identifiable alternative interpretations need to be specifically considered. Just because the reported values fall within the background concentrations does not necessarily support the position that there was no site-related contribution. Historical site usage and the potential for such activities to result in discharges should have been discussed to clearly establish that no identifiable site contributions would be anticipated to supplement whatever background concentration of arsenic may be present.

DON/USMC has stated that the potential for arsenic to be present at elevated concentrations was evaluated through the RI sampling evaluation. Yet having emphasized its reliance on random sampling and not sampling of the specific locations where waste was discharged, it is unclear how DON/USMC expects the sampling results to address the questions that were raised. For example, if DON/USMC has only evaluated the potential for arsenic to originate from alloy additives used in battery grids (see Hawley's Condensed Chemical Dictionary, 11th Edition at page 98) by making reference to the random sampling results, then such an approach is not adequate to address the concern that battery waste disposal could have lead to enriched arsenic concentrations in the specific area where such disposal occurred. Similarly, DON/USMC cannot reasonably evaluate the potential for the presence of arsenic in the pesticides and herbicides used at MCAS El Toro as part of base operations by reference to the results of the random RI sampling.

DON/USMC also states in the RI (see RI at page O7-6) that manganese is responsible for the hazard index (HI) being greater than 1 at Unit 1, Site 14. However, DON/USMC states that manganese is naturally present in soils and is not attributable to MCAS El Toro activities. Again, it is not

disposal occurred and was sampled accordingly.

With regard to arsenic, MCAS El Toro Site 7 was historically used as a drop tank drainage area. In the northern and eastern portions of the site, aircraft drop tanks were drained and washed on a concrete apron from approximately 1969 to 1983. The mixture of residual fuel and washwater reportedly drained off the edge of the concrete apron and onto the adjacent grassy area. Since arsenic is not a component of aviation fuel or washwater, arsenic was not identified as a site-related contaminant.

As noted in the RI, it is possible that arsenic compounds may have been used during agricultural or pest control practices prior to construction and expansion of MCAS El Toro (when the area was primarily agricultural). It is also possible that pesticides or herbicides containing arsenic may have been used in small quantities throughout the Station during the time the base was operational to control weeds, insects, and animals. However, such use of arsenic at Site 7 was not identified during the interviews or record reviews of the site, is not related to activities that took place at the site, and therefore does not represent an identifiable site contribution. This conclusion is substantiated by the fact that 98 percent of the samples collected at Site 7 contained arsenic concentrations below background for MCAS El Toro.

Site 14 was used as a battery acid disposal area from 1977 to 1983. As noted by GeoSyntec, arsenic could be a site-related chemical at Site 14 because arsenic was used historically as a minor additive (0.01 to 0.5 percent) to lead in lead-acid storage batteries. Therefore, it is possible that a small amount of arsenic could have leached from a battery's lead plates into the battery acid. However, because the concentration of arsenic that was available to be leached was very low to begin with, potential arsenic contributions to soil contamination would be minimal. In addition, by the time Site 14 was active, use of arsenic in batteries was in decline due to the introduction of maintenance-free batteries in the 1970's (U.S. Department of the Interior, Bureau of Mines Information Circular No. 9382, 1994).

The lack of a substantive source of arsenic is consistent with the fact that all

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the consistency of the reported values with the high end of the background range that we have questions. Rather, it is whether DON/USMC has given adequate consideration to site activities that might have supplemented background concentrations of manganese? The question remains, has DON/USMC considered that the presence of manganese could be associated with aviation activities, because manganese is present many metal alloys used in aviation and in welding and cutting torches used in repair or maintenance shops? While there may be an elevated ambient level of manganese in the area, the significance of potential contributions from various sources needs to be characterized. **Finally, with regard to potential risk-based remedial strategies overall, the source of the arsenic and manganese is not relevant. While naturally occurring metals concentrations are not typically targeted for remedial action, this does not mean that their contribution to overall risks is subtracted from the potential risks related to the site. For example, were the arsenic and manganese concentrations shown to be naturally occurring, they would not be identified as COCs requiring remedial attention. The contribution of these constituents to the overall risks (approximately 50%) would simply not be a controllable portion of such risks. However, where this background contribution added to other COCs results in significant overall risks (which appears to be potentially the case at Sites 7 and 14), then remedial strategies aimed at other COCs would still be needed.**	concentrations of arsenic reported at Site 14 were below background for MCAS El Toro. The GeoSyntec concern regarding the cumulative HI and manganese appears to confuse Sites 7 and 14. The cumulative HI at Site 7 Unit 1 exceeded 1 primarily due to manganese as indicated on page O7-6 in the RI. Conversely, the cumulative HI at Site 14 was less than 1 as indicated on page P7-5 in the RI. Manganese is not considered a site-related contaminant at Site 7 Unit 1. GeoSyntec suggests that manganese concentrations reported in soil at Site 7 Unit 1 could be attributed to the fact that manganese is present in many metal alloys used in aviation and in welding and cutting torches used in repair or maintenance shops. While aircraft that parked intermittently on the concrete apron near Site 7 Unit 1 were undoubtedly constructed using metal alloys containing manganese, that simple fact alone has no direct correlation to manganese concentrations in soil. Site 7 Unit 1 was used for washing aircraft drop tanks. It was not used for servicing or maintaining aircraft nor were repair or maintenance shops where welding and cutting torches may have been used located at this unit. Similarly, manganese is not considered a site-related contaminant at Site 14. The GeoSyntec suggestion that manganese contamination could be associated with welding and cutting torches used in repair or maintenance activities conducted at Site 14 (a grass-covered dirt strip along the pavement edge and an adjacent drainage ditch) is not consistent with the historical use of this site or the data collected during the RI. The cumulative HI at Site 14 is less than 1, manganese was not identified as a risk driver for Site 14 during the RI, and the reported manganese concentrations in soil at Site 14 are consistent with background. With regard to GeoSyntec's final comment about risk-based remedial strategies, the comment itself suggests that significant overall risks were identified for the units at Sites 7 and 14, a contention that is not supported by the risk assessments for Sites 7 and 14 or the NCP guidelines for determining the need for remedial action. Because the calculated risks for units at both sites

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	fell within the risk management range/generally allowable range, the DON conducted further evaluation of the data to determine whether remedial action or no further action was appropriate. The factors included in this further evaluation were thoroughly discussed in the DON response to Comment 1A in the draft Responsiveness Summary. The issue of reported arsenic and manganese concentrations in relation to background was but one of many factors considered by the DON. In the case of manganese for instance, the DTSC pointed out in their review of the Sites 7 and 14 RIs that the HI for manganese overestimated the risk because the exposure calculated for a resident child used the published inhalation reference dose for an adult. While this practice was consistent with U.S. EPA Region IX guidelines, using an inhalation dose appropriate for a child instead of the dose for an adult would have reduced the manganese HI by 50 percent, a significant consideration when the cumulative HI for Site 7 Unit 1 was only slightly above 1 to begin with. Considering all of the conservative approaches/factors incorporated into the DON risk assessments and how much the overall risk would have been reduced if less conservative assumptions had been used, the U.S. EPA, DTSC, and RWQCB agreed that the DON recommendation of no further action for Sites 7 and 14 is appropriate. The response to Comment 2E in the Responsiveness Summary has been revised to incorporate the information presented here.

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<u>Response to Comment 2F</u> **The DON/USMC's response to this comment has not addressed the significant point raised in the comments. GeoSyntec acknowledges the need for differing criteria upon which to base a decision to remediate versus remedial goals for a required cleanup. However, in the two sets of sites characterized, risks within the range requiring further consideration were estimated. As discussed above, GeoSyntec has identified concerns with DON/USMC's conclusion that there is adequate certainty in the risk estimates for Sites 7 and 14 to determine that remedial action is not needed. The lack of certainty that the highest risks in particular areas have been adequately identified, and the inconsistency of the spatial scale of the assessments for all potential future uses, are the two major factors leading to our conclusion that the uncertainties appear too high for DON/USMC to rely on a no-action approach where the risks calculated are in the highest third of the U.S. EPA risk range. The alternative decision, where estimated risks within the range requiring further *evaluation were determined to be most appropriately* addressed by risk reduction (i.e., Sites 8, 11, and 12), is pointed out as a more definitive way to ensure that risks are maintained within an acceptable range. The application of a 10^{-6} target level in conjunction with specific COCs for remediation would meet this goal of reducing the uncertainty that risks were adequately controlled.**	<u>**Response:**</u> Please see the response to the second part of Comment 2C in this document. Risks were estimated and assessed on a unit-specific basis, not averaged site-wide as these comments and those submitted previously suggest. Nor were any sample results (including the maximum lead concentrations cited previously) excluded from the data set used to perform each unit-specific risk assessment at these sites. U.S. EPA, DTSC, and RWQCB participated with the DON in delineating the individual units at each site, developing the sampling strategies, and defining the number of samples necessary to adequately characterize conditions within each unit at these sites before the RI was conducted. Further, based on the RI data, the regulatory agencies are satisfied that DON has adequately defined and evaluated the risks for the various units at each site and they concur that based on the risk assessment results, the DON recommendation for no further action at Sites 7 and 14 is appropriate.
<u>Response to Comment 2G</u> **The DON/USMC's response to this issue presumes that future pathways for groundwater exposure are not complete. GeoSyntec concurs both that complete pathways for groundwater exposure currently do not appear to exist and that enforceable, properly noticed and implemented, and durable prohibitions on groundwater extraction and use could preclude completed exposure pathways in the future. However, the RIs for Sites 7 and 14 do not appear to explicitly address such prohibitions in these particular areas. The RIs discuss only the evaluation of groundwater through other**	<u>**Response:**</u> The DON has assessed the risk from groundwater throughout Site 24, including groundwater underlying Sites 7 and 14, and has evaluated the need for prohibitions on its use. Both of these issues are central to the evaluation of contamination at Site 24 and the development of a remedial alternative for groundwater at that site. The evaluation showed that the risks due to groundwater are within the U.S. EPA risk range requiring remedial action. With regard to transfer of property overlying the groundwater plume, the DON is required to notify the transferee of the presence of contamination in

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investigations and reports. Since the risk assessment estimates are dependent on excluding any contribution from groundwater and the risk assessment results are relatively close to the high end of the risk management range (i.e., even moderate contributions from groundwater would result in clearly significant risks), the need to preclude groundwater extraction throughout the Site 7 and 14 or specifically evaluate such exposure should be discussed. Further, uncertainties associated with ensuring a lack of groundwater exposure should be directly addressed in the Point-of-Departure evaluation. **While the potential groundwater issues may be adequately covered and discussed in association with other sites, and this may be clear to the BCT and stakeholders during the BRAC process, the link between Sites 7 and 14 and groundwater risks from a plume originating from other sites will not necessarily be clear to others considering separate, subsequent redevelopment plans in the future. While the source of the plume underlying Sites 7 and 14 is not relevant to the potential risks at these specific locations, the local concentrations and time to achieve compliance with remediation targets are. There are means of ensuring that future site users are aware of the need to prohibit groundwater exposure in order for the risk assessment results to remain relevant. First, the risks from the directly underlying groundwater should be assessed, which would potentially allow for future uses; second, the need for continuous prohibition of groundwater use until such time as relevant concentrations are met. Both options need to be explored and discussed by DON/USMC.**	groundwater at the time of transfer. The DON will also include institutional controls prohibiting extraction or use of groundwater without prior approval from DON and the regulatory agency members of the BCT in the deed between the United States and the transferee. The deed will be recorded in the Office of the County Recorder for the County of Orange and will "run with the land" so that the prohibitions will apply to any future owners of the property as well as to the immediate transferee. Deed restrictions on use of groundwater are expected to be applied to all property overlying the groundwater plume that originates at Site 24, including those portions of Sites 7 and 14 that overlie the plume. The LRA is aware of the necessity for such restrictions through its participation in the property transfer process and through the review of the ROD for Sites 7 and 14. The transferee will also receive the proposed deed restriction language for review prior to property transfer. Future owners will also be restricted from use of groundwater because the deed restrictions will "run with the land."

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Response to Comment 2H **The DON/USMC's response to this issue does not address the importance of considering a relevant spatial scale in reaching risk assessment conclusions related to lead. The response refers back to a previous response (2C) in which DON/USMC presents the results of the U.S. EPA methodology for evaluating potential lead risks based on average site concentrations. The use of overall average concentrations from sites of this size does not adequately characterize the potential for substantially higher risks in particular locations. This is particularly pertinent in this instance because of the number of measurements of substantially higher lead levels and the lack of a directed delineation of areas where battery wastes were known to be disposed.** **More relevant than the potential risks from the average concentration is a comparison between the remedial goal calculated using CAL-EPA's LeadSpread model. As previously noted by GeoSyntec, DON/USMC reports that a soil exposure concentration of 290 mg/kg is the remedial goal based upon the model. Since 30% of the areas sampled exceed this goal (by as much as 3-fold), it is not reasonable for DON/USMC to conclude that there are no localized areas of sufficient size to be relevant for future receptors, where such receptors could be anticipated to realize blood lead levels greater than U.S. EPA limits. In fact, it is clear that there are substantial "hot" areas of lead impacts in soil (e.g. 931 mg/kg). Since relevant sized exposure areas for children could occur within such areas, there is no reasonable basis for DON/USMC not delineating lead-impacted areas and applying the remedial goal calculated by DON/USMC to any areas large enough to result in significant exposure.**	**Response:** As noted in the first paragraph of the response to Comment 2C in this document, DON did not identify specific, discrete disposal locations within the units at either Site 7 or 14. Instead, the entire pavement edges at Site 7 Units 1 and 3 and at Site 14 were reportedly areas where waste disposal or runoff from waste disposal on the adjacent pavement occurred. These areas were randomly sampled to identify potential hot spots and gather data to be used in the human health risk assessment in accordance with the approved sampling plan. Also, as noted in DON responses throughout this document, overall average concentrations from sites were not used to characterize potential risks, rather, sites were subdivided into smaller units for investigation based on similarity of conditions and historical waste disposal practices to more reliably assess risk. Spatial scale was an integral consideration in establishing the number of samples that needed to be collected at each unit to perform a reliable risk assessment. Further, after thorough review of the sampling approach, the numbers of samples, the sample analytical results, and the risk assessment procedures and conclusions by U.S. EPA and DTSC risk specialists, the regulatory agencies concurred with the DON recommendation for no further action at Sites 7 and 14. The second paragraph of this comment suggests that the DON evaluated potential risks using average concentration values and developed a remedial goal of 290 mg/kg for lead using the Cal-EPA pharmacokinetic model (Lead Risk Assessment Spreadsheet). Neither of these characterizations is correct. First, as noted in the response to comment 2C, the DON uses the reasonable maximum exposure rather than an average concentration for each contaminant included in the risk assessment as discussed in Section 6.2.3 of the Sites 7 and 14 RIs. Second, rather than a remedial goal, the 290 mg/kg value cited by GeoSyntec is the 99th percentile estimate of the concentration of lead in soil that when combined with estimated concentrations of lead in air, respirable dust, and water would produce a net blood lead concentration of 10 µg/dL (i.e.,

10 µg/dL is the risk benchmark value). A 95th percentile estimated concentration (585 mg/kg) is also calculated by the model. What is important to note is that both of these estimated soil concentrations are highly dependent on the assumed contributions from the other media used as inputs to the model. Because the blood lead concentration is based on the combined contributions from air, water, soil, and dust, increasing the concentrations of one or more of these media (i.e., using conservative estimates) would decrease the allowable concentrations from other media necessary to obtain the 10 µg/dL benchmark. For the DON's Site 7 and 14 risk assessments, the estimated lead concentration input values used for air and water are the Cal_EPA model defaults, which are very conservative estimates. For example, the 15-µg/L value used as the input for water is the California action level for lead in drinking water. This action level is 30-times greater than the concentration of lead actually present in drinking water distributed by the Orange County Water District (0.50 µg/L). Simply changing this one default model input value, substituting the actual lead concentration reported in drinking water for the more conservative California action level used by the DON, would increase the 99th percentile lead concentration for soil from 290 to 516 mg/kg and the 95th percentile concentration from 585 to 811 mg/kg. In terms of blood lead concentrations, changing only the value of this single input parameter would reduce the calculated blood lead concentrations for an adult by approximately 40 percent and for a child by approximately 23 percent. Using such realistic input values for the lead contributions from all non-soil media rather than the DON's more conservative assumptions would significantly reduce the blood lead concentrations calculated for an adult and a child, indicating that the actual risk from lead is lower than the estimates used by the DON for the Sites 7 and 14 risk assessments.

Additionally, the DON has never specified a remedial goal for lead in the RI of 290 mg/kg or any other concentration. As noted in the previous paragraph, the 290 mg/kg value cited repeatedly in GeoSyntec comments, a value calculated by the Cal-EPA pharmacokinetic model (Lead Risk Assessment Spreadsheet), is not a remedial goal nor did the DON use this number when evaluating the

risk presented by lead. As Sections 6.3.6 in Attachments O and P of the RI indicate, assessment of the risk presented by lead was a two-step process. First the exposure point concentrations (EPCs) for lead in shallow and surface soil were compared to the established residential and industrial PRGs respectively. For shallow soil, the EPC was compared to the residential Cal-EPA PRG of 130 mg/kg instead of the residential U.S. EPA PRG of 400 mg/kg, to assure a stringent, more conservative approach. For surface soil, the EPC was compared to the industrial U.S. EPA PRG of 1,000 mg/kg. If the EPC exceeded the PRG, the Cal-EPA pharmacokinetic model was used to calculate the 50th, 90th, 95th, 98th, and 99th percentile blood lead concentrations for an adult and a child. These calculated blood lead concentrations were then compared to the benchmark concentration of 10 micrograms per deciliter (µg/dL).

Further, as the response to comment 2H in the draft Responsiveness Summary indicated, use of the central tendency for a data set rather than the maximum reported concentration is the accepted U.S. EPA methodology for risk assessment. Every sample population by definition includes a single minimum and maximum value, as well as other values that fall between these extremes. Conditions within a unit area are defined by the intermediate values that represent a majority of the sample population and spatial extent of the unit, not by either of the extremes that represent a single value at a single location. Further, the maximum concentration in a sample population does not define a "hot spot" solely because it is the largest value as this comment suggests. A review of the lead data for Site 7 Unit 5 and for Site 14 indicate that in both areas, other lead concentrations of the same order of magnitude are present. The 931 mg/kg result from Site 7 Unit 5 and the 923 mg/kg result from Site 14 are simply the upper bound of each sample population.

The response to Comment 2H in the Responsiveness Summary has been revised to incorporate the information presented here.

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Response to Comment 2I **The RI and related information reviewed by GeoSyntec did not make it clear that any samples for Sites 7 or 14 had been considered in the basewide evaluation of hexavalent to trivalent chromium ratios. The specific number of such samples available should be made clear. Further, as previously noted, it would appear that there are obvious potential site-related contributions from tank washout and battery disposal areas. While specific chromium use/disposal may not have been noted at these sites, enriched chromium levels are found in many types of metals sites.** **Especially notable is the potential for atypical redox conditions in areas where battery acid was released, resulting in hexavalent to trivalent chromium ratios that are higher than usual. DON/USMC has noted that there is typically a relatively rapid reduction of hexavalent to trivalent chromium in soils. However, this resumes typical soils characteristics. Redox potential of battery acid-impacted soils is readily foreseeable to be substantially oxidizing (limiting reduction to trivalent chromium). Further, DON/USMC does not complete the discussion to note that there is, under many conditions, a substantial degree of cycling between reduced and oxidized chromium as the metal moves between various environmental compartments. Again, information on hexavalent to trivalent chromium ratios that is demonstrably site-related should be used to support DON/USMC's failure to complete risk assessment calculations for chromium. Furthermore, the uncertainties associated with any such ratios (e.g., samples not from battery acid-impacted soils) needs to be acknowledged by DON/USMC as being relevant to risk assessment conclusions.**	**Response**: The hexavalent chromium evaluation was conducted during the *OU-3 RI. The results are summarized in Section 4 of the OU-3A RI report.* The evaluation is referenced in Section 6.1.2 of Attachment O (page O6-3) for Site 7 and Attachment P (page P6-2) for Site 14. The hexavalent chromium investigation was conducted at the request of the regulatory agencies following their review of total chromium concentrations reported during the Phase I and Phase II field investigations. Samples were collected at locations throughout MCAS El Toro (including one sample from Site 7), and included several locations where the highest total chromium concentrations in soil had been reported. The DON, U.S. EPA, DTSC, and RWQCB jointly selected the locations and number of samples included in the evaluation. Because hexavalent chromium was not identified in any of the samples included in this evaluation, the regulatory agencies concurred that further sampling or consideration of hexavalent chromium for risk assessment was not necessary. Finally, battery acid disposal is reported to have taken place at Site 14 from 1977 to 1983. Even if the oxidizing conditions postulated by GeoSyntec resulted in elevated hexavalent chromium concentrations at the time of battery acid disposal, it is highly unlikely that these conditions would still be resulting in cyclic oxidation and reduction leading to formation of hexavalent chromium from trivalent chromium nearly 20 years later. The response to Comment 2I in the Responsiveness Summary has been revised to incorporate the information presented here.
Response to Comment 2J **In response to GeoSyntec's quantitative representation of the underestimation of risks from potential soil exposures, DON/USMC has indicated that the order of magnitude of the risk estimates would not be different if current surficial soil had been considered. GeoSyntec concurs**	**Response:** As the DON response to Comment 2J in the draft Responsiveness Summary indicated, changing the U.S. EPA and DTSC accepted standard of 0- to 10-foot-bgs to 0- to 2-foot-bgs would not change the order of magnitude of the total risk calculated for the various units at Sites 7 and 14. Because the risk would remain within the risk management range under either scenario, the

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that the potential uncertainty is probably less than 10-fold. However, considering that the risk estimates for some of the subareas were less than 3-fold below the top end of the U.S. EPA target risk ranges, such a degree of uncertainty would appear to be significant to the confidence of remaining within target risks. **Rather than presenting the potential risks from the current surficial soil to residential receptors, DON/USMC has maintained that such receptors should only be evaluated after assuming future mixing of the soil down to 10 feet. The 0-10 ft depth interval is frequently recommended and used for evaluating potential future risks where the exposure scenario can only reasonably occur subsequent to the disturbance and mixing of the surficial soil (as in regrading the excavating foundations and basements). However since there is not reason to anticipate that soils in all areas would be mixed down to 10 ft prior to the occurrence of exposures other than industrial, the evaluation of a 0-10 ft depth interval alone does not fully characterize potential future risks. Therefore, DON/USMC should also consider residential exposure scenarios for the upper 2 feet of the soil horizon.**	factors evaluated further when determining the necessity for remedial action remain the same, as would the conclusion that no further action was necessary. In addition, GeoSyntec implies by this comment that the DON selected the 0 to 10 ft depth interval for calculation of residential risks at Sites 7 and 14 over other potential depth intervals. On the contrary, risk assessment parameters, including the depth interval to be used to calculate industrial, recreational, and residential risks, are specified in the Risk Assessment Work Plan that was developed in 1995 (Final Risk Assessment Work Plan, Marine Corps Air Station, El Toro, California, Bechtel National, Inc. 1995). This plan was developed in accordance with regulatory agency requirements and has been used to evaluate risks at all IRP sites at MCAS El Toro. Finally, the conservative assumptions used throughout RI planning and implementation, including use of a residential scenario even though the property is planned for industrial reuse, provide a level of confidence more than sufficient to support the DON's no further action recommendation. U.S. EPA, DTSC, and RWQCB confidence in that recommendation predicated on their intimate involvement in all aspects of the entire Sites 7 and 14 RI process, is reflected in their concurrence that no further action is the appropriate recommendation for these sites.

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Additional Comment 1 **On page 3 of the RS, DON/USMC indicates that many of the concentrations detected at Sites 7 and 14, while being greater than the statistically-determined background value, still fall within the range of the concentrations detected during the DON/USMC's "background" study and, therefore, do not exceed background. Statistical studies involve collecting and analyzing a large number of samples and calculating a statistical average value which represents "background." However, because of the large number of samples collected at various locations (sometimes in areas which may be impacted), it is typical that some samples may, in fact, not represent true naturally-occurring background conditions. Therefore, the "high" concentrations in the population collected for background concentration determination do not necessarily represent natural background conditions, even though the samples were collected as part of the background study. Such samples are not representative of background and should not be considered to be part of the acceptable background concentrations.** **In light of this, DON/USMC should not consider high concentrations detected at Site 7 and 14 as being acceptable simply because they are within the range of the concentrations measured during the background study. Statistical derivations of background allow for a statement of the confidence associated with concluding that any particular value falls within the background distribution. DON/USMC should indicate how likely it is that each of the noted elevated concentrations falls within the background distribution (present the relevant percentiles of the background distribution). Also, as discussed above, consistency with a given background range does not necessarily mean that concentrations in a particular location have not been enriched above natural background by site impacts. Areas with low background concentrations may remain within the background range even if some site-related impacts have occurred. This is the reason that specific consideration of identifiable sources of a particular metal must be discussed in detail. To further**	**Response**: The background study is referenced in the draft Responsiveness Summary and is available in the Administrative Record file that is maintained at MCAS El Toro and at SWDIV. As with all other aspects of the RI's conducted at MCAS El Toro, planning and implementation of this background evaluation were conducted under scrutiny of the regulatory agencies. The samples included in the evaluation of background concentrations for metals in soil were not collected in impacted areas and, as indicated in the DON response to Comment 1A on page 3 of the draft Responsiveness Summary, they are indicative of naturally occurring concentrations and the variation present in nature. DON did not consider the highest metals concentrations reported at Sites 7 and 14 acceptable simply because they fell within the overall range of background sample concentrations. This was only one of several factors considered. Other factors included consideration of the historical site activities and the likelihood that these activities would generate wastes containing elevated concentrations of metals, and the overall range of concentrations reported for samples within each unit.

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evaluate the issue of background concentration determination, GeoSyntec would appreciate the opportunity to review the background study prepared by DON/USMC for MCAS El Toro.	
Additional Comment 2 **DON/USMC indicates that the fact that PAH present at Sites 7 and 14 are not mobile supports its no-action recommendation. While off-site migration is always a concern, the presence of the contaminants at Sites 7 and 14 is of similar concern. Thus, if the contaminants at Site 7 and 14 are a threat to public health and safety and the environment if they migrate off site, they remain an equal or greater threat if they remain on site.**	**Response:** The lack of mobility of PAHs was only one factor considered by the DON in recommending no further action. It was considered important because the lack of mobility makes it unlikely that the PAHs in soil at Sites 7 and 14 would migrate off site or to groundwater. It was also pointed out that it is very likely that the contribution to risk from PAHs is overestimated because the risk assessment conservatively assumes that concentrations remain constant over the 30-year exposure period used for the residential risk scenario. However, it is very unlikely that the organic chemical concentrations will remain constant, particularly in soil. As the Sites 7 and 14 RIs indicated in the contaminant fate and transport discussion of contaminant transformation processes (Section 5.2.2 for Site 7 and Section 5.2.1.2 for Site 14), the PAH risk drivers benzo(a)pyrene and dibenzo(a,h)anthracene are biodegradable. Under aerobic conditions, the half-lives of these PAHs have been estimated to be 1.45 and 2.57 years, respectively, with 0.16- and 1-year half-lives possible under ideal conditions.
Additional Comment 3 **DON/USMC acknowledges that a number of lead concentrations are greater than 290 mg/kg (which could cause an excessive risk by their own modeling of remedial goals). Yet, because the average concentration does not result in an excessive risk, DON/USMC asserts that no remediation is necessary. While an overall site remediation may not be necessary, DON/USMC should consider performing remediation of "hot spots" at Sites 7 and 14. Such a focused remediation approach would reduce risks to health and safety and the environment to acceptable levels and would not result in excessive costs.**	**Response:** As indicated in the response to Comment 2H presented earlier in this document, the 290 mg/kg for lead does not represent a remedial goal, nor does the presence of lead at or exceeding this concentration in a given sample represent an excessive risk. DON and the regulatory agency members of the BCT examined the data collected during the RI and did not identify any areas, including Unit 5 at Site 7 and Unit 1 at Site 14 where the highest lead concentrations were reported, as requiring further evaluation as hot spots. The issue of lead concentrations, specifically the maximum lead concentrations at Sites 7 and 14, and the inappropriateness of basing risk assessment solely on the maximum reported concentration has been addressed in the DON responses to Comments 1B and 2C in the draft Responsiveness Summary, and in the DON responses to Comment 2C and Comment 2H in this document.

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Additional Comment 4 **DON/USMC states that at least 22,000 gallons of jet fuel and/or lubricating oil were discharged in the area of Site 7 (see Phase II RI at page O1-2). Has DON/USMC reconciliated the quantity of jet fuel and oil discharged at Site 7 with the observed soil concentrations and the aerial extent of impacted soil?**	**Response:** No, DON has not attempted to perform such a reconciliation. Also, for clarification, the estimated volume that may have been disposed at Site 7 over the 15-year period identified in the RI was *up to* 22,000 gallons of liquid wastes, not *at least* 22,000 gallons as stated in this comment. While the types and quantities of wastes that may have been disposed at Site 7 during the period the site was in active use were important considerations during formulation of the RI work plan, they have only an indirect bearing on the subsequent RI determination of whether a remedial action or a no further action recommendation is appropriate. The primary factors in determining whether remedial action is required are the residual concentrations of contaminants identified during the RI and the resulting human health risk. Because petroleum hydrocarbons are biodegradable, natural attenuation of hydrocarbon concentrations would occur over time. In addition, release of VOC constituents into the atmosphere would also be expected. As a result, the estimated total volume of petroleum hydrocarbons that may have been disposed at Site 7 between 1969 and 1983 may have little or no direct correlation with the residual concentrations that remain in soil nearly 20 years after the disposal activities ceased. Therefore, actual, not hypothetical, contaminant concentrations are used to determine whether the current condition of the site is acceptable for reuse.
Additional Comment 5 **A sediment sample collected in the catch basin at Site 4 (Sample 14_CBBE) exhibited a concentration of TPH (as diesel) equal to 11,100 mg/kg and a concentration of TRPH of 7,364 mg/kg (see RI at page P4-13). DON/USMC indicates that this catch basin did not receive surface-water runoff from the Battery Acid Disposal Area (See RI at page P3). Could DON/USMC provide information regarding the origin of the hydrocarbon found in the catch basin? As hydrocarbon concentrations are greater than the typical OCHCA-recommended action levels, DON/USMC should remediate the catch basin at Site 14.**	**Response:** As noted in the response to Comment 2D, no sediment was present in the catch basin when it was visually inspected during the Phase II RI. Because the risks at the Catch Basin were within the range considered allowable (based on Phase I data), no sediment was present at the time of the Phase II RI, and the results of sampling conducted at other Site 14 locations showed that TRPH and TPH in surface soil were either non-detect or present at low concentrations (and would therefore be unlikely to re-contaminate the catch basin in the future), the DON concluded that no further action was required. The U.S. EPA, DTSC, and RWQCB concurred with that recommendation.

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	The Sites 7 and 14 RI did not speculate on the source of the hydrocarbon reported in the catch basin during the Phase I RI. The catch basin receives runoff from the adjacent surface streets as well as from Site 14.
Conclusion **The ultimate conclusion of the RI (see RI at pages O7-9 and P7-8) and the Proposed Plan (see Proposed Plan at page 5) is that no further action is required at either Site 7 or 14. This conclusion appears to be based, in part, on the following assumptions by DON/USMC:** • **the excess cancer risk is less than 10^{-4}; and** • **arsenic and manganese are naturally occurring.** **A no-further-action approach at Site 7 and 14 would leave a residential excess cancer risk greater than 10^{-5} for some areas where exposure is assumed to occur only to soils mixed from 0-10 feet. If current surficial conditions are considered, future residential risks could readily exceed 10^{-4}. A number of factors that contributed significant uncertainty to the estimated risks have been identified, including the failure of DON/USMC to match the spatial scale of potential exposure areas with the derivation of exposure point concentrations, the failure of DON/USMC to quantitatively estimate risks from any environmental media other than soil, and the potential presence of hotspots. The Point-of-Departure evaluation used by DON/USMC to reach the conclusion that risks nearing the top of the U.S. EPA target risk range do not require controls does not take into account these, or any significant, sources of uncertainty that could result in the calculated risks being underestimated.** **In addition, one of the risk drivers, arsenic, may not be naturally occurring at Site 7 and 14 as asserted by DON/USMC. Further, non-cancer risks were above the threshold HI of 1 that is typically the trigger for further evaluation or remediation. And, there were clearly areas of lead contamination substantially exceeding both the default CAL-EPA residential criterion and the remedial goals calculated in the site-specific**	**Response:** The conclusion that no action is required at Sites 7 and 14 is not based on the fact that risks are less than 10^{-4} but on the fact that all risks are either within the allowable (10^{-6} or less) or generally allowable (10^{-4} to 10^{-6}) risk ranges and that risks within the generally allowable risk range have been evaluated and found to be acceptable using risk management criteria provided in the NCP Preamble. The U S. EPA, DTSC, and RWQCB were participants in and concurred with the RI process. These agencies reviewed the sampling plans for both sites, the data that were gathered, and the risk evaluations that were performed. Careful and thorough evaluation of all aspects of the planning, field investigation implementation, contaminant characterization, and risk assessment activities by the regulatory agencies were the basis for their concurrence with the DON recommendation for no further action at these sites. This included concurrence on the following. • That the concentrations of arsenic and manganese reported in soil samples collected at both sites were consistent with naturally-occurring background concentrations in soil and did not represent contamination resulting from historical site activities. • That 0 to 10 feet bgs was the appropriate depth interval for evaluating residential risk at MCAS El Toro. • That subdividing sites into smaller units characterized by common physical characteristics and waste disposal histories provided the spatial scale required to characterize the nature and extent of contamination and evaluate risk with the level of confidence necessary for decision making. • That the number of samples and their locations within each unit at Sites 7 and 14 were sufficient to characterize the nature and extent of contamination and evaluate risk with the level of

risk assessment. The limitations and readily identifiable factors that may result in the reported risk estimates underestimating potential risks for these sites under certain future uses means that any future risk management decisions should make use of DON/USMC's risk assessment conservatively. Finally, it appears that concentrations of TPH well in excess of typical action levels are present at Sites 7 and 14. In light of these factors, DON/USMC's conclusion that no remediation of Sites 7 and 14 is required does not appear to be valid and, therefore, must be re-evaluated.

Some additional work which should be considered by DON/USMC at Sites 7 and 14 include:

- **evaluation and delineation of hot spots;**
- **remediation of hot spots; and**
- **remediation of TRPH and TPH of OCHCA-recommended action levels.**

Such action would be protective of human health and the environment and facilitate reuse of Sites 7 and 14.

confidence necessary for decision making.

- That contamination at both sites was confined to shallow soil and had not impacted groundwater beneath either site.
- That the Site 24 groundwater plume beneath Sites 7 and 14 will be addressed as part of the remedial action for Site 24 and did not require further action specific to Sites 7 and 14 beyond the identification of use restrictions on groundwater cited in Section 8 of the No Action ROD for Sites 7 and 14.
- That the risk assessments were based on a series of conservative assumptions that were considered to overestimate rather than underestimate the risk at these sites.
- That for the reasons presented in the RI (and repeated in DON responses to comments in the draft Responsiveness Summary), the non-cancer HI values for the units at Sites 7 and 14 were not of a magnitude that required remedial action (as discussed in the draft Responsiveness Summary, an HI of greater than 1.0 does not necessitate remediation as this comment suggests, but does necessitate the further evaluation that was performed by the DON in accordance with the NCP requirements).
- That remediation of metals in soil (including lead) is not necessary based on the risk assessment results for metals at both sites.
- That remediation of hot spots is not necessary because the DON and the regulatory agency members of the BCT examined the data collected at the sites during the RI and did not identify any areas requiring further evaluation as hot spots.
- That based on this preponderance of evidence, no further action is protective of human health and the environment at Sites 7 and 14.

While the U.S. EPA, DTSC, and RWQCB concur with the DON

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	recommendation for no further action at Sites 7 and 14, the RWQCB requested in their 26 February 2001 comment on the draft No Action ROD that DON further investigate the 32,091 mg/kg TRPH concentration reported in surface soil at Site 7 Unit 5 location 07_GN1. The DON will comply with RWQCB's request and will address this concern under the PCA Program. This will not impact the no action status of Site 7 under CERCLA.