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MCAS EL TORO
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Commandant of the Marine Corps
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DEPARTMENT OF THE NAVY
SOUTHWEST DIVISION
NAVAL FACILITIES ENGINEERING COMMAND
ENVIRONMENTAL DIVISION
1220 PACIFIC HIGHWAY, RM 18
SAN DIEGO, CALIFORNIA 92132-5181

5090
Ser 183A/790
June 23, 1995

Ms. Julie Anderson
U. S. Environmental Protection Agency
Region IX
Code H-9-2
75 Hawthorne Street
San Francisco, CA 94105

Dear Ms. Anderson:

The purpose of this letter is to request extensions of the deadlines set forth in Appendix A of the Federal Facilities Agreement (FFA) under section 120 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) at Marine Corps Air Station (MCAS) El Toro. More specifically, the Department of Navy (DON) requests a revised deadline for submittal of the Draft Interim Action Feasibility Study (IAFS) and extensions of the deadlines associated with the Draft Proposed Plan and Draft Interim Record of Decision (ROD) for Operable Unit (OU) # 1 pursuant to Section 9 of the FFA. Before detailing the specific formal basis for the extension of the deadlines under the FFA procedures and criteria, it is necessary to describe the fundamental changes in the approach to OU#1 that have occurred since December 1994 which have necessitated this extension request.

In the March 1993 time period, DON representatives met with representatives of U. S. Environmental Protection Agency (USEPA) and California Environmental Protection Agency (Cal-EPA) to discuss a streamlined approach to the IAFS for OU#1 designed to expedite selection and implementation of remedial action and take into account the impending construction of the Orange County Water District's (OCWD) Irvine Desalter Project (IDP). This multiple-purpose local project was intended to address and remediate total dissolved solids (TDS) and nitrate pollution, develop a local water supply, and intercept and treat the Volatile Organic Compounds (VOC) plume that was the focus of OU#1. OCWD had communicated to DON its intention to proceed with the project with or without DON participation and support. Taking into account this major local water development project, there was a pressing need to develop a coordinated approach to OU#1.

A consensus developed among the FFA parties to follow a presumptive, remedy-focused feasibility study approach derived from USEPA's Superfund Accelerated Cleanup Model (SACM). It was agreed that the IAFS would only address the no action and IDP alternatives. An informal accelerated schedule was developed and shared with the FFA parties projecting submittal of a Draft Interim ROD under the FFA six months ahead of schedule. In parallel with the development of the IAFS, DON was

attempting to negotiate a settlement agreement with OCWD resolving DON's potential liability to OCWD and obtain a binding commitment from OCWD to implement the

CERCLA remedial action selected for OU#1. There was a spirit among the FFA parties of mutual risk-taking in an effort to expedite remedial action.

OCWD continued with its plans to design and construct the IDP, installing groundwater extraction wells, purchasing easements and parcels for project construction, and developing a Preliminary Design Report by March 1994. A Draft IAFS report was submitted by DON to the FFA parties on September 1, 1994, well ahead of the March 23, 1995, FFA deadline. Through the fall of 1994, the FFA parties reviewed the Draft IAFS report and provided comments to DON. FFA party acceptance of the streamlined approach was confirmed. Upon confirmation, DON determined that it was timely to initiate settlement negotiations with OCWD.

Unfortunately, when formal settlement negotiations with OCWD were initiated in October 1994, it quickly became apparent that there were significant issues relating to cost allocation which rendered expeditious negotiation of an agreement with OCWD unfeasible. In particular, the question of whether DON would pay for desalinization costs unrelated to DON's potential liability was a source of disagreement. An agreement with OCWD, including OCWD's agreement to accept extracted water into the IDP, was ultimately an indispensable requirement for the remedial action. Following an exchange of settlement-related correspondence and a series of meetings, by December 1994 it was apparent that there were significant impediments to such an agreement that would have to be overcome.

In order to resolve the technical and regulatory questions relating to the desalinization cost issue, DON and OCWD agreed that additional information was required beyond that addressed in the Draft IAFS as then conceived. In particular, it was deemed necessary to investigate alternatives involving reinjection of extracted and treated water in lieu of delivering that water to a public water supply system in order to determine if desalinization would be required for reinjection. DON and OCWD agreed to suspend the negotiation of an agreement while a revised Draft IAFS was developed. In addition, DON identified the need to consider other alternatives in the event an agreement with OCWD was ultimately not feasible.

In a BRAC Cleanup Team (BCT) meeting on December 14, 1994, this issue was discussed and there was general acknowledgment by the team members that the Draft IAFS, as scoped in March 1993, would not be adequate given the developments in the discussions between DON and OCWD. Because there were no impending FFA deadlines at the time, the issue of amending the FFA schedule was temporarily tabled by consensus. The existing scope of work for the CLEAN contractor's IAFS effort allowed significant work in rescoping and redirecting the IAFS effort to proceed in developing and screening additional remedial alternatives and minimize the impact of

procurement requirements upon the FFA schedule. A formal contract modification was deferred until certain technical issues could be resolved and the precise scope of the effort could be defined for the detailed analysis of alternatives.

The BCT was periodically briefed on the status of the development and screening of the new alternatives through the first quarter of 1995 at monthly BCT meetings addressing MCAS El Toro OU#1 issues. Information presented is available with the BCT members. In addition, the BCT was involved in the identification of applicable or relevant and appropriate requirements (ARARs) for the new alternatives in January and February 1995. The expansion in the scope of the IAFS was formally communicated to the FFA parties in a letter to the State of California requesting identification of State ARARs dated February 17, 1995, (Enclosure 1). The State responded on April 10, 1995 (Enclosure 2).

In early March 1995, DON determined that the expansion in the scope of work and level of effort required a formal modification of the contract with its CLEAN I contractor before actual drafting of the revised draft IAFS report could proceed. That effort was initiated on March 1, 1995 and involved formal identification of the scope of work, development of a cost estimate, and negotiation of a Contract Task Order (CTO) modification with the CLEAN I contractor as required by the Federal Acquisition Regulations (FAR). During this period, a series of technical meetings between DON and OCWD were conducted to more precisely define and achieve consensus regarding the technical approach to be taken in addressing several issues relating to the development of remedial alternatives, including related groundwater modeling.

The contract modification process was completed on June 21, 1995. In addition, the technical work involved in the screening and development of the additional remedial alternatives and addressing groundwater modeling issues raised by the BCT is essentially complete. The detailed analysis of remedial alternatives and preparation of the actual revised Draft IAFS report are now underway. The revised Draft IAFS report will be ready for submittal to the FFA parties on October 15, 1995.

As of the date of this letter, formal settlement negotiations with OCWD are proceeding with ongoing technical discussions, although resolution of several difficult issues has been deferred pending further progress on the revised Draft IAFS. OCWD has delayed further design and construction of the IDP. DON intends to resume the negotiations with OCWD following further development of the IAFS if OCWD is willing to do so. Significantly, on May 26, 1995, OCWD submitted a letter to Mr. Juan Jiminez, DTSC's representative on the BCT, challenging the Santa Ana Regional Water Quality Control Board's ARAR determinations regarding the issue of whether water extracted and treated for VOC removal must be treated to remove TDS/nitrates prior to reinjection into the subbasin from which the water was extracted (Enclosure 3). DON anticipates further OCWD commentary throughout the remedy selection process for OU#1. In summary, an extension of the FFA deadlines for a revised Draft IAFS, the Draft

Proposed Plan and the Draft Interim ROD for MCAS El Toro OU#1 are necessary to address the additional time required to develop the significantly expanded IAFS. In accordance with Section 9.1 of the FFA, the following information is presented in this request:

(a) Although the current FFA deadline for submittal of the Draft IAFS by March 23, 1995, was satisfied by DON's September 1, 1994 submittal of the Draft IAFS, a significantly revised Draft IAFS is being developed necessitating a new deadline for submittal of a Draft IAFS to allow FFA party review prior to submittal of a Draft Final IAFS; therefore, DON requests a revised deadline for Draft IAFS submittal of October 15, 1995. In addition, DON requests that the Draft Proposed Plan due date be extended from June 23,1995, to December 18, 1995, and the Draft Interim ROD due date be extended from December 29, 1995 to May 31, 1996.

(b) These dates constitute 7 month, 6 month, and 5 month extensions, respectively.

(c) Under FFA Sections 9.2 (g), (d), and (a), individually and in the alternative, good cause exists for these extensions. See discussion below.

(d) No other FFA milestone dates would be affected by these extensions.

The Department of the Navy is requesting that the resulting schedules be extended as shown on the proposed revised Appendix A for OU #1 (Enclosure 4).

Good Cause for Schedule Extension

1. Section 9.2(g):

Section 9.2(g) states that good cause exists when sought in regard to "Any other event or series of events mutually agreed to by the Parties constituting good cause.". As described above, the BCT has acknowledged the need to expand the scope of the Draft IAFS. In February and March 1995 the BCT cooperated with DON in addressing potential State ARARs associated with the additional remedial alternatives identified for the revised Draft IAFS. In addition, in several BCT meetings from January to May 1995, status reports were provided by DON's representatives and the progress of the revised Draft IAFS was discussed. The BCT understood and agreed that FFA deadline extensions would be required, and that this extension request letter would be forthcoming. The potential barriers to agreement between DON and OCWD regarding the IDP were recognized by the FFA parties as a mutually agreed event(s) necessitating expansion of the scope of the Draft IAFS and good cause to extend the relevant FFA deadlines. In a June 16, 1995, meeting between DON and USEPA managers in USEPA Region IX offices and communications with managers of the other FFA signatories, this good cause and the deadline extensions set forth above were acknowledged.

2. Section 9.2(d):

Section 9.2(d) states that good cause exists when "A delay caused, or which is likely to be caused, by an extension (including without limitation an extension under subsection 7.7) in regard to another timetable and deadline or schedule." Extensions of the deadlines for the Draft Proposed Plan and Draft interim ROD are required because of the revised deadline for the revised Draft IAFS.

3. Section 9.2(a):

Section 9.2(a) of the FFA indicates that an event of Force Majeure constitutes "good cause" for a schedule extension. A Force Majeure event under Section 10.1(k) has occurred warranting the extensions based upon good cause.

Section 10.1(k) states a Force Majeure event includes "inability to obtain, at reasonable cost and after exercise of reasonable diligence, any necessary authorizations, approvals, permits or licenses due to action or inaction of any governmental agency or authority other than the Department of the Navy (including the Marine Corps);". OCWD, a governmental agency, has indicated it will not enter into an agreement regarding remediation of VOCs in groundwater and treatment of VOCs in their proposed IDP due to disagreement with DON regarding payment of desalinization costs, despite DON's diligent effort to negotiate such an agreement on a reasonable cost basis. OCWD agreement and approval of the discharge of groundwater into the IDP is a requirement for the only remedial alternative in the September 1, 1994, Draft IAFS other than the no-action alternative. A continued lack of approval by OCWD, at a reasonable cost, has and could in the future constitute a "fatal flaw" in the IAFS and has required substantial expansion of the scope of the September 1, 1994 Draft IAFS to address additional remedial alternatives as explained above. This constitutes a "Force Majeure" event.

In order to expedite VOC source control at MCAS El Toro, DON intends to elevate the priority of the scheduled pilot study for Site 24 in MCAS El Toro OU#2A and move expeditiously to any necessary response action following completion of that study. We

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appreciate the team spirit shown by all FFA Parties and look forward to your continual engagement in the project. Please contact Mr. Andrew Piszkin at (619) 532-2635 if you have further questions.

Sincerely,

JAMES R. PAWLISCH
Director, Environmental Department
By direction of
the Commanding Officer

Encl:
(1) DON ltr dtd February 17, 1995, Ser 1832.JJ/435
(2) DTSC ltr dtd April 10, 1995
(3) OCWD ltr dtd May 26, 1995
(4) Appendix A, MCAS El Toro Schedule

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Mr. John Scandura
Department of Toxic Substances Control
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Commanding General,
Assistant Chief of Staff, Environmental
Marine Corps Air Station El Toro
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Santa Ana, CA 92709-5001

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Commander
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February 17, 1995

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Juan M. Jimenez
Remedial Project Manager
State of California Environmental Protection Agency
Department of Toxic Substance Control, Region 4
Base Closure Unit
245 Broadway, Suite 425
Long Beach, CA 90802-4444

Re: IDENTIFICATION OF STATE "APPLICABLE" OR "RELEVANT AND APPROPRIATE" REQUIREMENTS (ARARs) FOR THE REMEDIAL INVESTIGATION AND FEASIBILITY STUDY (RI/FS) FOR OU1 AT MARINE CORPS AIR STATION, EL TORO

Dear Mr. Jimenez:

The purpose of this letter is to request that the Department of Toxic Substances Control (DTSC), as lead agency for the State of California, identify any additional specific potentially applicable or relevant and appropriate requirements (ARARs) under State law for Marine Corps Air Station (MCAS) El Toro for additional remedial alternatives which the Department of Navy (DON) has determined should be added to the MCAS El Toro Operable Unit (OU) #1 Interim Action Feasibility Study (IAFS) currently under development. These additional alternatives are described in Enclosure 1. They have been discussed among representatives of the parties to the MCAS El Toro Federal Facilities Agreement (FFA) at the BRAC Project Team meeting in San Francisco on January 18, 1995 and during a conference call on January 31, 1995. The alternatives were also the topic of discussion at a meeting between DON and the Santa Ana Regional Water Quality Control Board in Riverside on January 19, 1995.

DON acknowledges receipt of DTSC's April 11, 1994 response to DON's March 4, 1994 request for identification of State ARARs on the remedial alternatives previously addressed in the September 1994 draft IAFS submitted to USEPA and CALEPA for review and comment. DON is currently reviewing and considering comments received on the ARARs analyses contained in that draft IAFS and will respond in due course. DON would like to emphasize that it is requesting that DTSC and supporting agencies identify additional potential State ARARs for the additional alternatives being added to the IAFS and is specifically not requesting that ARARs for the remedial alternatives already addressed in the September 1994 draft IAFS and the related USEPA and CALEPA

Encl (1)

comments be addressed unless those requirements have been amended, repealed or otherwise changed. In order to facilitate DTSC's effort, two components of a draft ARARs analysis addressing the "new" ARARs for the "new" remedial alternatives have been enclosed (Enclosures 2 and 3). Enclosure 2 specifically addresses certain key potential State ARARs of central importance to remedial alternatives involving reinjection of treated groundwater back into aquifers from which the groundwater was drawn. Enclosure 3 contains draft ARARs analyses that relate to other "new" State ARARs for the "new" remedial alternatives (Enclosure 3).

Section 2.1 of Enclosure 2 addresses potential ARARs relating to total dissolved solids (TDS) and nitrates that are administered by the Santa Ana Regional Water Quality Control Board. These potential ARARs are of time-critical concern to DON because they directly bear on the scope and cost of the reinjection remedial alternatives. Early State concurrence with the Section 2.1 ARARs analysis will significantly facilitate keeping the project on schedule. DON would greatly appreciate receiving a response to this portion of the draft ARARs analysis directly from the Santa Ana Regional Water Quality Control Board not later than fourteen (14) calendar days from the date of receipt of this letter. DON recognizes that this timeframe is shorter than that provided under the requirements set forth below but would greatly appreciate the cooperation of the State in accomodating it. If the State is unable to respond in that timeframe, DON will look for a response within the timeframes set forth below.

To ensure complete ARARs identification, we ask that you provide us the following information for any potential State ARARs which are not addressed in the enclosures to this letter:

1. A specific citation to the statutory or regulatory provision(s) for the potential State ARAR and the date of enactment or promulgation.

2. A brief description of why the potential State ARAR is applicable or relevant and appropriate.

3. A description of how the potential State ARAR would apply to potential remedial actions, including: specific numeric discharge, effluent, or emission limitations; hazardous substance/constituent action or cleanup levels; and whether the State intends to take the position that the potential State ARAR will be interpreted to include such limitations, levels, etc.

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4. If the State believes its proposed ARAR is more stringent that the corresponding Federal ARAR, please provide the rationale and technical justification for this position.

5. If the State determines that there is not enough information to fully respond to our request, please identify any additional information that would be required to support identification of State ARARS and their application.

6. A description of any other criteria, advisories, guidance, and proposed standards that the State of California requests to be considered (TBCs) for OU-1.

As you know, timely identification of potential State ARARs is required under Section 121(d)(2)(a) of CERCLA and under the National Contingency Plan (NCP), 40 CFR Sections 300.400(g) and 300.515(d) and (h). Additionally, identification of ARARs is stipulated in paragraph 7.69 (a) & (b) of the Federal Facility Agreement (FFA) between the U.S. Environmental Protection Agency, the State of California, and the U.S. Department of the Navy; and in Section V.A.2.c of the 1990 Memorandum of Understanding between your agency, the State Water Resources Control Board, and the Regional Water Quality Control Boards.

Consistent with the above-cited provisions, we request that you send a response via first class mail addressed to me and postmarked within 30 calendar days of receipt of this request. If you have any technical questions concerning this request, please contact Andy Piszkin, Remedial Project Manager, SOUTHWEST NAVFACENGCOM at (619) 532-2635. Legal questions should be directed to Rex Callaway, Associate Counsel (Environmental), SOUTHWESTNAVFACENGCOM (619) 532-1662. Thank you for your prompt attention in this matter.

Sincerely,

JOSEPH J. JOYCE
BRAC Environmental Coordinator
By direction of
the Commanding Officer

Enclosures (3)

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Ron Ress, Counsel, COMCABWEST
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Enclosure #1

MCAS EL TORO RI/FS

OPERABLE UNIT 1 - REGIONAL GROUNDWATER

DRAFT ALTERNATIVES

These alternatives are being evaluated during revisions to the OU-1 Interim Action Feasibility Study (IAFS) now under development.

The only actions identified for evaluation in the new draft which were not evaluated in the previous draft of the IAFS are the discharge actions in Alternatives 2 (MCAS El Toro Extraction/Treatment) and 5 (Desalter with Independent MCAS El Toro Shallow Aquifer Extraction/Treatment) and potential recharge to the aquifer via dry washes (but not to include discharge to surface waters). They are briefly described below.

As the development of the revised IAFS proceeds, the alternatives listed here may change slightly. However, the Department of Navy (DON) does not anticipate introducing actions that are not presented in the following list.

1. No Action

This alternative consists of conditions as they exist at present.

2. MCAS El Toro Extraction/Treatment

a. Extracted/treated groundwater reinjected
b. Extracted/treated groundwater reinjected but with a portion sent to irrigation and/or the IRWD reclaim water system during the dry season
c. Extracted/treated groundwater recharged to aquifer via dry washes (no discharge to surface water)
d. Extracted/treated groundwater discharged to water purveyor for upgrade to potable water quality

In this alternative the Desalter Project does not proceed. The Department of Navy (DON) designs and constructs a groundwater extraction system to contain the highest detected concentrations of TCE and benzene in the southwest portion of the Station and to address the

VOC contamination that has migrated into the principal aquifer downgradient of the Station. The extracted groundwater is treated to remove VOCs.

3. Desalter Only

In this alternative the Desalter Project proceeds as presented in *The Irvine Desalter Project Preliminary Design Report* (Orange County Water District, March 1994). The plans call for installation of several wells in the principal aquifer west and downgradient of MCAS El Toro to extract approximately 5700 gallons per minute of groundwater. The extracted groundwater is treated to remove VOCs, and further treated to be sold as potable water.

4. Desalter/Additional Extraction with Discharge to Desalter

a. Without Pretreatment to Remove VOCs
b. With Pretreatment to Remove VOCs

In this alternative the Desalter Project proceeds as in Alternative 3, above, with the addition of on-Station shallow extraction wells to contain the groundwater with the highest detected concentrations of TCE and benzene in the southwest portion of the Station. In addition, existing agricultural wells may be used to assist in containment at the toe of the VOC plume.

5. Desalter with Independent MCAS El Toro Shallow Groundwater Extraction/Treatment/Discharge

a. Extracted/treated shallow groundwater reinjected
b. Extracted/treated shallow groundwater reinjected but with a portion sent to irrigation and/or the IRWD reclaim water system during the dry season
c. Extracted/treated shallow groundwater recharged to aquifer via dry washes (no discharge to surface water)
d. Extracted/treated shallow groundwater discharged to water purveyor for upgrade to potable water quality

This alternative is the same as Alternative 4 except that the shallow groundwater extracted on-Station is not discharged to the Desalter.

Enclosure #2

Preliminary Identification of ARARs for Reinjection of Groundwater

1.0 Introduction

This Enclosure includes a preliminary identification of specific, potential Applicable or Relevant and Appropriate Requirements (ARARs) for additional remedial alternatives under development for Operable Unit 1 (OU-1) of the revised draft of the MCAS El Toro Interim Action Feasibility Study Report (Revised Draft IAFS) that relate to reinjection of groundwater following removal of volatile organic compounds (VOCs) in lieu of delivering the treated water to the proposed Irvine Desalter Project. Identification of State ARARs for the OU-1 IAFS was requested by the Navy on March 4, 1994. The State of California Department of Toxic Substances Control responded on April 11, 1994 with a preliminary identification of State ARARs. The OU-1 Draft IAFS was submitted for Agency review on September 1, 1994. Agency comments on the Draft IAFS, including ARARs, have been received. Agency comments on ARARs that were raised in the Draft IAFS, but are also relevant to reinjection are not specifically addressed here, but will be addressed later in the comment response period.

The impetus for early action on the VOC contamination in the regional groundwater stemmed from the planned development of the Irvine Desalter Project (Desalter) by the Orange County Water District (OCWD). All but one of the remedial alternatives considered in the September 1, 1994 Draft IAFS were developed under the baseline assumption that the Desalter would be operational in the near future. Alternative 2 did not incorporate the Desalter as a final treatment of extracted groundwater, and was not carried through the full analysis.

The Draft IAFS is currently being revised to add remedial alternatives that do not include discharge of extracted groundwater to the Desalter. These new alternatives expand on Alternatives 2 and 4 in the Draft IAFS. Preliminary descriptions of these alternatives are included in Enclosure #1. The alternatives will be more fully developed as a part of the revision of the Draft IAFS, and will be presented in the Revised Draft IAFS.

This enclosure contains a preliminary identification of ARARs only for reinjection of extracted and treated groundwater. Reinjection of treated groundwater is a key component of two of the alternatives being developed, and represents a technology that has not been evaluated previously for this site. A timely identification of State ARARs is key to the further development of these remedial alternatives. The discussion of ARARs for these alternatives will be refined as the alternatives are fully evaluated during development of the Revised Draft IAFS. This enclosure does not duplicate ARARs discussion contained in Appendix B of the Draft IAFS. Preliminary identification of ARARs for the other potential discharge options is contained in Enclosure #3.

2.0 Preliminary Identification of ARARs for Remedial Alternatives Incorporating Reinjection of Treated Groundwater.

The chemicals of concern and remedial objectives for the regional groundwater were identified in the Draft IAFS, and will not be repeated here. Similarly, ARARs related to extraction or treatment of groundwater will not be included in this discussion. Only issues related to the reinjection of treated groundwater are covered here.

Two remedial alternatives are being developed for the OU-1 Revised Draft IAFS that incorporate reinjection following treatment of groundwater for VOC removal.

Alternative 2a. MCAS El Toro Extraction/Treatment, with Reinjection of Treated Groundwater

- Alternative 5a. Desalter with Independent MCAS El Toro Shallow Groundwater Extraction, Treatment, and Reinjection

Alternative 2a. includes extraction of groundwater to contain the highest detected concentrations of trichloroethylene (TCE) and benzene in the southwest portion of the Station, and to address the VOC contamination that has migrated into the principal aquifer downgradient of the Station. The extracted groundwater will be treated to remove VOCs, then reinjected into the aquifer. This alternative is based on the assumption that the Desalter will not proceed.

Alternative 5a. includes on-Station extraction of the shallow groundwater containing the highest detected concentrations of TCE and benzene in the southwest portion of the Station. The extracted groundwater will be treated to remove VOCs, and reinjected into the groundwater. Unlike Alternative 2a., this alternative is based on the assumption that the Desalter will proceed, and will capture most of the VOC contamination in the principal aquifer.

ARARs related to reinjection concern the quality of groundwater to be reinjected, and the relative placement of extraction and reinjection wells. Since these issues affect both reinjection alternatives, the alternatives will not be examined separately. Issues related to regional groundwater quality (TDS and nitrates, specifically) and treatment for VOC removal will be addressed separately.

2.1 Potential ARARs Relating to Reinjection, and TDS and Nitrates

Groundwater quality in the vicinity of MCAS El Toro includes elevated concentrations of total dissolved solids (TDS) and nitrates. The TDS concentrations appear to be due to natural processes. Nitrates appear to be of human origin (agriculture, etc.). Groundwater monitoring performed as part of the MCAS El Toro RI/FS indicates that the presence of elevated concentrations of TDS and nitrates is not related to MCAS El Toro activities. Potential ARARs relating to reinjection of treated groundwater (following VOC remediation) which

contains natural TDS and nitrates from non-DON sources that were evaluated include provisions of the Porter-Cologne Water Quality Control Act, State Water Resources Control Board (SWRCB) policies, and Basin Water Quality Control Plan. Reinjection of treated groundwater (following VOC remediation) which contains naturally occurring levels of TDS, and nitrates from non-DON sources, without treatment of such TDS and nitrates is consistent with the Porter-Cologne Water Quality Control Act, State Water Resources Control Board (SWRCB) policies, and the Santa Ana Basin Water Quality Control Plan, so long as the location of reinjection does not result in degradation of existing water quality. See following discussion. In addition, it should be noted that the Department of Navy has no liability for or authority under CERCLA to respond to these pollutants in these circumstances. See Sections 104 (a) (3) (A) and 101 (22) (D) of CERCLA.

2.1.1 SWRCB Resolution No. 92-49 Cleanup Policy

State Water Resources Control Board Resolution No. 92-49 entitled "Policies and Procedures for Investigation and Cleanup and Abatement of Discharges Under Water Code Section 13304" (Resolution No. 92-49) addresses the establishment of cleanup levels. The Department of Navy accepts Section III.G. of Resolution No. 92-49 as a potential "relevant and appropriate" State ARAR. Resolution No. 92-49 states that :

> "dischargers are required to cleanup and abate the effects of discharges in a manner that promotes attainment of background water quality, or the highest water quality which is reasonable if background levels of water quality cannot be restored, considering all demands being made and to be made on those waters and the total values involved, beneficial and detrimental, economic and social, tangible and intangible." (Resolution No. 92-49 section III G)

It is clear that this policy does not require cleanup below background concentrations. Section III. F. 1 of the Resolution states: "Conform to the provisions of the Resolution No. 68-16 of the State Water Board, and the Water Quality Control Plans of the State and Regional Water Quality Control Boards, provided that under no circumstances shall these provisions be interpreted to require cleanup and abatement which achieves water quality conditions that are better than background conditions."

Groundwater monitoring performed as part of the MCAS El Toro RI/FS indicates that background conditions for the El Toro site includes elevated concentrations of TDS and nitrates from sources unrelated to MCAS El Toro activities.

2.1.2 Water Quality Control Plan for the Santa Ana River Basin, 1994.

As discussed in Section 2.1.1, Resolution No. 92-49 does not require cleanup beyond existing background groundwater quality. This position is consistent with the Water Quality Control Plan, although Resolution No. 92-49 would take precedence in the event of a conflict with the Plan on this.

The Water Quality Control Plan for the Santa Ana River Basin is prepared and implemented by the Santa Ana Regional Water Quality Control Board (Regional Board) for the purpose of protecting and enhancing the quality of the waters of the State in the Santa Ana Region. The Water Quality Control Plan (Basin Plan) establishes location specific beneficial uses and water quality objectives for the ground and surface waters of the region, and is the basis of the Regional Board's regulatory programs. The Basin Plan includes both numeric and narrative water quality objectives for specific groundwater subbasins. The water quality objectives are intended to protect the beneficial uses of the waters of the Region, and to prevent nuisance. The 1994 amended Basin Plan is currently under review by the State Office of Administrative Law. If it is approved as a properly promulgated plan, it will be considered a potential State ARAR. It is addressed below in anticipation of approval.

The most serious water-related problem in the Santa Ana River Basin is water supply (Basin Plan, p. 1-10). Therefore, beneficial use and reuse of water are key aspects of the Basin Plan. MCAS El Toro is located in the Lower Santa Ana River Basin. The subbasins potentially affected by the reinjection alternatives include the Irvine Forebay I, Irvine Forebay II, and the Irvine Pressure subbasins. Those three subbasins all have the following beneficial use designations (Basin Plan, p. 3-32):

Municipal and Domestic Supply
- Agricultural Supply
- Industrial Service Supply
- Industrial Process Supply

Water Quality Objectives have been established for all three subbasins in the El Toro OU-1 project area. The Objectives for Total Dissolved Solids and Nitrates are listed in Table 1.

Table 1 - Selected Water Quality Objectives for Subbasins in the El Toro Project Area 1

Subbasin	TDS (mg/l)	Nitrate (as N) (mg/l)
Irvine Forebay I	1000	8
Irvine Forebay II	720	6
Irvine Pressure	720	6

1 Water Quality Control Plan for the Santa Ana River Basin, 1994, page 4-45

The first Basin Plan for the Santa Ana River Basin was prepared in 1974 (1974 Basin Plan). The 1974 Basin Plan contained water quality objectives for the Irvine Forebay and Irvine Pressure Subbasins. The water quality objectives were based on existing (1967-1970) groundwater quality. (The Irvine Forebay was subsequently divided into two subbasins, denoted Forebay I and Forebay II.) The original water quality objectives (WQOs) represented "the average quality of water in the zones being pumped. That is, the current groundwater quantity and quality data, based on use, were the background data for establishing the numerical value[s]." (Water Quality Control Plan Report, Santa Ana River Basin (8), 1974, page 4-11.) The 1974 plan stated, "The physical extent of these groundwater subbasins and the variations in quality within each subbasin strongly suggest an averaging of the quality to allow the establishment of stringent yet effective objectives for these waters." (ibid, page 4-11)

Intended implementation of the WQOs included consideration of localized water quality. "The beneficial uses and water quality objectives set forth in this plan apply to general areas. The Regional Board, in setting waste discharge requirements, will consider the particular impact on beneficial uses within the immediate area of influence of the discharge, the existing quality of receiving waters, and the appropriate water quality objective." ." (Water Quality Control Plan Report, Santa Ana River Basin (8), 1974, page 4-1.)

For the Irvine Forebay and Irvine Pressure subbasins, the 1974 Basin Plan set WQOs including an objective of 720 mg/l for Filterable Residue (Total Dissolved Solids), and 6 mg/l for Nitrate (as N). (Water Quality Control Plan Report, Santa Ana River Basin (8), 1974, Table 4-4.) The WQOs for TDS and nitrate in the Irvine Forebay II and Irvine Pressure subbasins have not changed, although the Basin Plan was reevaluated and revised in 1983 and in 1994. (1994 Basin Plan, Table 4-1, page 4-45.) In June 1980, a study done for the State of California Department of Water Resources Southern District reviewed the data for the Irvine Forebay I subbasin, and resulted in a change in the WQOs for the Irvine Forebay I subbasin. ("Ground Water Basin Objectives for Irvine Forebay Subarea", Memorandum Report, State of California Department of Water Resources Southern District, June 1980.) The new WQOs appeared in the 1983 Basin plan, and subsequently in the 1994 Basin Plan as 1000 mg/l Total Dissolved Solids (TDS) and 8 mg/l Nitrate (as N).

Although the 1974 Basin Plan implementation was intended to preserve water quality, it was recognized that subbasins without assimilative capacity, which included both the Irvine Forebay and Irvine Pressure subbasins, were likely to degrade in quality. "In those subbasins listed below, the basin plan development and choices of alternatives indicated that no assimilative capacity exists, and that the mineral quality of such subbasins will continue to degrade in spite of controls, management procedures and practices set forth and recommended in this Water Quality Control Plan." (Water Quality Control Plan Report, Santa Ana River Basin (8), 1974, page 4-11.)

Lower WQOs for TDS and nitrates have been established for the Irvine Forebay II, and Irvine Pressure Subbasins (720 mg/l, and 6 mg/l, respectively) than for the Irvine Forebay I Subbasin (1000 mg/l, and 8 mg/l, respectively). Since the water quality varies within and between the

subbasins, the WQOs may be considered relevant for establishment of reinjection locations relative to extraction locations. Reinjection locations will be selected to prevent degradation of groundwater quality, or to enhance groundwater quality, if possible. (The relative quality of groundwater at extraction and reinjection locations is further discussed under Resolution 68-16, below).

Under past SWRCB adjudicatory precedent, existing ambient levels of pollutants in receiving water bodies which originated from other sources than the proposed discharger (i.e., naturally occurring levels of TDS) can be a basis for establishing waste discharge requirements which exceed WQOs and still be considered to be consistent with a Water Quality Control Plan. The SWRCB addressed a proposed discharge into waters containing naturally occurring TDS levels in In the Matter of the Petition of Gerry D. Bayless for Review of Order No. 76-4 of the California Regional Water Quality Control Board, Santa Ana Region Order No. 77-13. That case involved the establishment of waste discharge requirements where naturally occurring levels of TDS at the proposed discharge location exceeded those relied upon to establish the Basin Plan water quality objectives and relied upon by the Regional Board in establishing proposed waste discharge requirements for TDS.

Upon review of the petitioner's appeal, the State Board held that naturally occurring dissolved solids at the proposed discharge location should be utilized as the appropriate "base level" for establishing waste discharge requirements in lieu of the Basin Plan's water quality objectives. The State Board held: "In this particular case, the quality of the water in the non-water bearing area is the appropriate base dissolved solids level. The Regional Board should issue waste discharge requirements for the proposed discharge using this base level".

At MCAS El Toro, current groundwater concentrations of TDS and nitrates, as reflected in monitoring data, exceed the WQOs at some locations. Based on the discussion from the 1974 Basin Plan of variability in water quality throughout the basin, this is not surprising. The elevated background concentrations of TDS and nitrates in the El Toro project area are not due to El Toro activities. Treated water would be reinjected in locations that would not degrade water quality at the reinjection locations. Reinjection of the groundwater would not contribute additional solids or nitrates to the basin, and would be consistent with Basin Plan and the WQOs, as a reflection of average (not uniform) water quality in the basin.

2.1.3 California State Water Resources Control Board Resolution No. 68-16

As discussed in Section 2.1.1, Resolution No. 92-49 does not require cleanup beyond existing background groundwater quality. Resolution No. 92-49 provides that State Water Resources Control Board Resolution No. 68-16 (antidegradation policy) cannot be interpreted to require "cleanup and abatement which achieves water quality conditions that are better than background conditions".

The antidegradation policy is not an ARAR for Alternatives 2a. and 5a., as no actions that would result in degradation of water quality are being considered.

2.2 Potential ARARs Relating to Reinjection, and VOCs

Groundwater quality in the MCAS El Toro OU-1 project area contains VOCs released during past operations at MCAS El Toro. Appendix B of the MCAS El Toro OU-1 Draft IAFS includes discussion of potential chemical and action specific ARARs for groundwater extraction and treatment. That discussion will not be repeated here. The remedial objective for groundwater was derived from that discussion. Treatment of extracted groundwater prior to reinjection will be consistent with the remedial objectives for groundwater. Supplemental discussion of how the potential ARARs addressed in Appendix B of the OU-1 Draft IAFS relate to reinjection are set forth below.

2.2.1 Resolution No. 92-49 Cleanup Policy

State Water Resources Control Board Resolution No. 92-49 entitled "Policies and Procedures for Investigation and Cleanup and Abatement of Discharges Under Water Code Section 13304" (Resolution No. 92-49) addresses the establishment of cleanup levels. The Department of Navy accepts Section III.G. of Resolution No. 92-49 as a potential "relevant and appropriate" State ARAR. Resolution No. 92-49 states that :

> "dischargers are required to cleanup and abate the effects of discharges in a manner that promotes attainment of background water quality, or the highest water quality which is reasonable if background levels of water quality cannot be restored, considering all demands being made and to be made on those waters and the total values involved, beneficial and detrimental, economic and social, tangible and intangible." (Resolution No. 92-49 section III G)

Remedial action objectives for the area of concern for OU-1 were established in the El Toro OU-1 Draft IAFS. Treatment of extracted groundwater for removal of VOCs prior to reinjection, using the technologies discussed in the Draft IAFS, would be consistent with the remedial action objectives of MCLs. The technologies being considered for treatment of extracted groundwater are adsorption and air stripping, which are classified as Best Available Control Technologies.

2.2.2 Water Quality Control Plan for the Santa Ana River Basin, 1994.

As discussed earlier, the Water Quality Control Plan for the Santa Ana River Basin is prepared and implemented by the Santa Ana Regional Water Quality Control Board (Regional Board) for the purpose of protecting and enhancing the quality of the waters of the State in the Santa Ana Region. Numeric water quality objectives have not been established in the Basin Plan for VOCs. A narrative objective for toxic substances in groundwater states:

"All waters of the region shall be maintained free of substances in concentrations which are toxic, or that produce detrimental physiological responses in human, plant, animal, or aquatic life." (1994 Basin Plan, page 4-14)

As discussed in Section 2.2.1, the remedial action objective for VOCs in groundwater are the MCLs, which are designed to be protective of human health.

2.2.3 California State Water Resources Control Board Resolution No. 68-16

The State Water Resources Control Board Resolution No. 68-16 (antidegradation policy) establishes a policy that high quality waters of the State "shall be maintained to the maximum extent possible" consistent with the "maximum benefit to the people of the State" (Resolution 68-16 paragraph 1.) The antidegradation policy provides that whenever the existing quality of water is better than that required by applicable water quality policies, such existing high quality water will be maintained. If degradation of water quality may occur due to water use or discharge, the State or Regional Water Board's antidegradation analysis must be performed to determine if the degradation is permissible. (State Water Resources Control Board Administrative Procedures Update on Antidegradation Policy Implementation of NPDES Permitting, APU No. 90-004, p.1) The antidegradation analysis determines whether the degradation will (1) be consistent with the maximum benefit to the people of the State; (2) will not unreasonably affect present and anticipated beneficial use of such water, and (3) will not result in water quality less than that prescribed in the polices. (Resolution 68-16 paragraph 1)

Antidegradation analysis is required only if the proposed discharge will lower baseline water quality of the receiving waters. (State Water Resources Control Board Administrative Procedures Update on Antidegradation Policy Implementation of NPDES Permitting, APU No. 90-004, p.1) Alternatives 2a. and 5a. will improve the overall water quality in the area of known contamination; however, the exact location of the reinjection wells has not yet been determined. Alternatives 2a. and 5a. will not consider reinjection in areas of the Basin not already associated with the known contamination. However, if to better accomplish cleanup, treated groundwater may be reinjected just outside the area of known contamination. Placement of these wells will depend on additional data that will be collected during remedial design (e.g., long-term pumping tests), on technical decisions with regard to the most effective approach to overall cleanup of the known contamination (e.g., reinjection at the upgradient edge to provide flushing, or at the downgradient edge to provide a hydraulic barrier), and on physical constraints present at the site (e.g., buildings, tarmac). Placement of the reinjection wells actually within the contaminant plume could be expected to induce contaminant migration rather than to reduce it.

If the most effective technical approach requires that reinjection wells be placed at the edge of the area of contamination rather than within it, the extracted groundwater to be reinjected would be treated to MCLs. These levels will protect beneficial use.

2.2.4 RWQCB General Permit- VOC Limit on Reinjected Water

Preliminary discussions were held with the Regional Board on 19 January 1995, to identify treatment standards for removal of VOCs prior to reinjection. The Regional Board has issued a General Groundwater Cleanup Permit for the discharge of extracted and treated groundwater resulting from the cleanup of groundwater polluted by fuel leaks and other related wastes at service stations and similar sites (Order No. 91-63, NPDES NO. CA 8000233, October 18, 1991.). The Regional Board representative indicated that, for consistency across the basin, the numeric treatment standards listed in the General Permit should be used for the MCAS El Toro OU-1 groundwater treatment prior to reinjection. The General Permit is scheduled to expire in October, 1996. When it is reissued, the treatment standards may be more stringent.

Although onsite CERCLA response actions are exempt from permit requirements under Section 121(e) of CERCLA, DON considers the substantive requirements of the General Permit to be a "TBC" and means of ensuring compliance with potential ARARs such as MCLs, the Basin Plan, SWRCB Resolution No. 68-16, etc. Treatment standards that may be relevant to the reinjection alternatives are listed in Table 2. (General Permit p. 5 of 51, A.2.)

Table 2 - Discharge Standards for Treatment of Groundwater1		
Constituent	**Maximum Daily Concentration Limit**	**Units**
Benzene	1.0	ug/l
Carbon Tetrachloride	0.5	ug/l
Chloroform	5.0	ug/l
Chloromethane	N.S.2	
1,2-Dichloroethylene (1,2-DCE) (total)	10.0	ug/l
1,1-Dichloroethylene (1,1-DCE)	6.0	ug/l
1,2-Dichloroethane (1,2-DCA)	N.S.	
1,1-Dichloroethane (1,1-DCA)	5.0	ug/l
Ethylbenzene	10.0	ug/l
Methylene Chloride	N.S.	
Tetrachloroethylene (PCE)	5.0	ug/l
Toluene	10.0	ug/l
Trichloroethylene (TCE)	5.0	ug/l
1,1,1-Trichloroethane (1,1,1-TCA)	5.0	ug/l
1,1,2-Trichloroethane (1,1,2-TCA)	N.S.	
Xylenes	10.0	ug/l

1 General Groundwater Cleanup Permit, Order No. 91-93, NPDES No. CA 8000233, October 18, 1991, page 5 of 51.
2N.S.= No Standard Listed

Enclosure #3

Preliminary Identification of ARARs for Potential Discharge Options for Treated Groundwater

1.0 Introduction

This enclosure includes a preliminary identification of specific potential Applicable or Relevant and Appropriate Requirements (ARARs) for additional remedial alternatives under development for Operable Unit 1 (OU-1) of the revised draft of the MCAS El Toro Interim Action Feasibility Study Report (Revised Draft IAFS). Identification of State ARARs for the OU-1 IAFS was requested by the Navy on March 4, 1994. The State of California Department of Toxic Substances Control responded on April 11, 1994 with a preliminary identification of State ARARs. The OU-1 Draft IAFS was submitted for Agency review on September 1, 1994. Agency comments on the Draft IAFS, including ARARs have been received. Agency comments on ARARs that were raised for other alternatives, but are also relevant to the new alternatives, are not specifically addressed here, but will be addressed later in the comment response period.

The impetus for early action on the volatile organic compound (VOC) contamination in the regional groundwater stemmed from the planned development of the Irvine Desalter Project (Desalter) by the Orange County Water District (OCWD). All but one of the remedial alternatives considered in the Draft IAFS were developed under the baseline assumption that the Desalter would be operational in the near future. Alternative 2 did not incorporate the Desalter as a final treatment of extracted groundwater, and was not carried through the full analysis.

The Draft IAFS is currently being revised to add remedial alternatives that do not include discharge of extracted groundwater to the Desalter. These new alternatives expand on Alternative 2 in the Draft IAFS. Preliminary descriptions of these alternatives are included in Enclosure #1. The alternatives will be more fully developed as a part of the revision of the Draft IAFS, and will be presented in the Revised Draft IAFS.

This enclosure contains a preliminary identification of ARARs only for the new remedial alternatives, and only for discharge options other than reinjection. Preliminary ARARs related to reinjection of treated groundwater were discussed separately in Enclosure #2. The discussion of ARARs for these new alternatives will be refined as the alternatives are fully evaluated during development of the Revised Draft IAFS. This enclosure does not duplicate ARARs discussion contained in Appendix B of the Draft IAFS.

2.0 Preliminary Identification of ARARs.

The chemicals of concern and remedial objectives for groundwater have not changed from those identified in the Draft IAFS, and will not be repeated here. Similarly, ARARs related to extraction or treatment of groundwater will not be included in this discussion, because they were covered in the Draft IAFS Appendix B. Only issues related to the final disposition of extracted and treated groundwater will be covered here.

2.1 Alternative 2b. MCAS El Toro Extraction and Treatment of Groundwater with Discharge to the IRWD Reclaim Water System or the Area Irrigation System (The Irvine Company, or Other)

Potential ARARs for Alternative 2b. concern the quality of groundwater to be discharged to the IRWD Reclaim line or the area irrigation system. The IRWD was established pursuant to California Water Code 34000 to treat water for municipal and industrial (potable) uses, and non-potable uses (irrigation). The IRWD operates a reclaim water system which distributes water for irrigation purposes and other similar uses. IRWD controls the quality of water in the reclaim system by limiting discharges into the system. Since the IRWD requirements are not promulgated State requirements, they are not ARARs, but administrative requirements.

The Irvine Company (TIC) operates a network of irrigation supply lines in the area, and regulates the quantity and quality of discharges to the line. Similarly to the IRWD requirements, these limits are not ARARs, but administrative requirements.

Both IRWD and TIC seek to control the quality of the water in their systems to prevent degradation of basin water quality. Irrigation is considered a beneficial use of water. Therefore the WQOs in the Basin Plan do not apply.

2.3 Alternative 2c. MCAS El Toro Extraction and Treatment of Groundwater with Recharge of Aquifer via Dry Washes

There are several dry washes located near the Station which may be suitable for use as recharge basins. OCWD operates and maintains rapid percolation basins in the Santa Ana River streambed and recharge pits, ponds, and basins in the Santa Ana Forebay area. (Basin Plan, 1994, page 5-26.)

In locating dry washes for potential use as recharge basins, evaluation of underlying groundwater quality, with respect to TDS and nitrates would be a key consideration. If extracted water quality is significantly lower than the groundwater quality underlying the dry wash, desalting could be required to prevent groundwater degradation.

The ARARs for recharge basins are essentially the same as those described for reinjection (Enclosure #2). Since recharge of treated groundwater would not result in the addition of salts or nitrates to the groundwater, the Waste Discharge Requirements (WDRs) and WQOs would not apply. The WQOs for the subbasins could be relevant to use of the washes for

recharge in areas outside the area of contamination. If the washes are located in area of cleaner groundwater, relative to the extraction area, groundwater treatment may need to include partial desalting to meet the WQOs for TDS or nitrates.

The dry washes would be dammed to enhance recharge to the aquifer and to prevent discharge to surface water. Therefore, NPDES requirements would not apply. Evaluation of flood plains may be needed if damning the washes would affect surface water runoff during flood conditions.

2.4 Alternative 2d. MCAS El Toro Extraction and Treatment of Groundwater with Discharge to Water Purveyor for Upgrade to Potable Water Quality

ARARs would be the same as those evaluated for Alternative 4 in the Draft IAFS.

2.4 Alternative 5b. MCAS El Toro Extraction and Treatment of Shallow Groundwater with Discharge to the IRWD Reclaim Water System or to the Area Irrigation System (The Irvine Company or Other)

Potential ARARs for Alternative 5b. concern the quality of groundwater to be discharged to the IRWD Reclaim line or The Irvine Company (TIC) irrigation system. The IRWD was established pursuant to California Water Code 34000 to treat water for municipal and industrial (potable) uses, and non-potable uses (irrigation). The IRWD operates a reclaim water system which distributes water for irrigation purposes and other similar uses. IRWD controls the quality of water in the reclaim system by limiting discharges into the system. Since the IRWD requirements are not promulgated State requirements, they are not ARARs, but administrative requirements.

The Irvine Company (TIC) operates a network of irrigation supply lines in the area, and regulates the quantity and quality of discharges to the line. Similar to the IRWD requirements, these limits are not ARARs, but administrative requirements.

Both IRWD and TIC seek to control the quality of the water in their systems to prevent degradation of basin water quality. Irrigation is considered a beneficial use of water. Therefore the WQOs in the Basin Plan do not apply.

Other ARARs would be similar to those evaluated in the Draft IAFS for Alternative 4.

STATE OF CALIFORNIA — ENVIRONMENTAL PROTECTION AGENCY PETE WILSON, Governor

DEPARTMENT OF TOXIC SUBSTANCES CONTROL

Region 4
245 West Broadway, Suite 425
Long Beach, CA 90802-4444

(310) 590-4919

April 10, 1995

Mr. Joseph Joyce
BRAC Environmental Coordinator
U.S. Marine Corps Air Station El Toro
P.O. Box 95000
Santa Ana, CA 92709-5000

Dear Mr. Joyce:

STATE APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS (ARARs) FOR THE REVISED INTERIM REMEDIAL INVESTIGATION/FEASIBILITY STUDY (RI/FS) OPTIONS FOR OPERABLE UNIT (OU)-1 AT MARINE CORPS AIR STATION (MCAS), EL TORO

This is in response to your letter dated March 21, 1995 requesting potential state ARARs for the groundwater plume associated with Operable Unit (OU) - 1 at MCAS El Toro. The Department of Toxic Substances Control (DTSC) has provided potential state ARARs for OU-1 on April 11, 1994, these will not be reiterated.

Per your request, DTSC has contacted and solicited ARARS from state and local government agencies (List Enclosed). As part of the process and in accordance with §7.6 of the Federal Facilities Agreement (FFA), DTSC has contacted, in writing, those state and local governmental agencies that were a potential source of ARARs. This letter transmits the results of the additional request for identification of ARARs for MCAS El Toro. We have received potential ARARs from the following: California Regional Water Quality Control Board - Santa Ana Region, South Coast Air Management District, the Department of Health Services and the Orange County Health Care Agency.

The Department hereby notifies the Navy of the agencies that failed to respond to our ARAR solicitation. Under the terms of the FFA, the Navy is responsible for contacting the agencies that failed to respond and to again solicit their inputs, if necessary.

DTSC would like to reiterate the following: we are concerned that all possible constituents of concern for OU-1 have not been identified. On a related matter, the concern that the samples are not representative due to aeration is still an issue. For details see prior ARARs submittal dated April 11, 1994.

Encl (2)

In addition, the consensus was to pursue an interim Record of Decision (ROD) for OU-1. The interim ROD would allow for changes, if necessary, based on additional information obtained from subsequent groundwater monitoring events. These groundwater monitoring events are anticipated but not yet implemented. There is one additional item which merits mention: It is not necessary or appropriate to set cleanup levels in an interim Record of Decision, which is an expected milestone from the activities at OU 1. They should be treated as goals until such time as a Final Remedy for Operable Unit 1 is agreed to by all parties, with meaningful and timely public input.

Moreover, in accordance with United States Environmental Protection Agency (U.S. EPA) guidance, we feel that we do not have to provide the rationale and technical justification, as requested, for a state ARAR that is more stringent than the corresponding federal ARAR. The fact that such ARARs are promulgated by the State of California qualifies the requirements as ARARs by definition. According to U.S. EPA, a state requirement is promulgated if it is legally enforceable and of general applicability (40 CFR §300.400(g)(4)). Furthermore, state requirements are presumed to have been consistently applied unless there is evidence to the contrary. In other words, the state need not justify the consistent application of its ARARs at the time it submits its ARARs. Evidence must be provided by others to demonstrate that a requirement has not been consistently applied. In addition, the state ARARs contained herein are appropriate by being currently promulgated during this evaluation.

CHEMICAL-SPECIFIC ARARs

See the action-specific paragraph for chemical-specific ARARs which have been identified.

ACTION-SPECIFIC ARARs

The following action-specific ARARs were provided in this iteration, usually technology- or activity-based requirements or limitations

See the Orange County letter, which is attached, for an ARAR on the Construction and Abandonment of Water Wells. This is also a Location Specific ARAR.

The South Coast Air Quality Management District has provided their latest Rules and Regulations to be considered as ARARs. (also attached). These include chemical and location specific

ACTION-SPECIFIC ARARs (Continued)

ARARs which have been, in some instances, previously identified.

The California Regional Water Quality Control Board provides some clarification and corrections to the Navy's identification of their ARARs. (Attached)

LOCATION-SPECIFIC ARARs

See action-specific ARARs for identification of location specific ARARs.

TO BE CONSIDERED (TBC) CRITERIA

No new TBCs have been identified.

DTSC strongly encourages the Navy to re-contact the Department of Health Services, Office of Drinking Water Standards, as they have a say for water which is treated and has a potential beneficial use as a potable water source.

Because of the iterative nature of the RI/FS process, the identification of ARARs will likely continue throughout the process as a better understanding is gained of site conditions, site contaminants and remedial action alternatives.

If you have any questions concerning this matter, please contact me at (310) 590-4919.

Sincerely,

Juan Manuel Jimenez
Base Closure Unit

Enclosures

cc: W. A. Dos Santos, CDR, CEC, USN
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Anthony J. Landis
DSMOA Technical Program Manager
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State of California

Memorandum

To: Juan M. Jimenez
Remedial Project Manager
Department of Toxic Substances Control
245 West Broadway, Suite 425
Long Beach, CA. 90802-4444

Date: March 22, 1995

From: CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD - SANTA ANA REGION
2010 IOWA AVENUE, SUITE 100, RIVERSIDE, CALIFORNIA 92507-2409
Telephone: CALNET 632-4130 Public (909) 782-4130

SUBJECT: ADDITIONAL ARARS FOR SPECIFIC REMEDIAL ALTERNATIVES FOR OPERABLE UNIT 1 (OU-1) AT MARINE CORPS AIR STATION, EL TORO

On March 9, 1995 we received your request for RWQCB ARARs for MCAS El Toro OU-1, specifically to address additional remedial alternatives. We understand that the Department of Navy (Navy) is not requesting ARARs for the remedial alternatives already addressed in the September 1994 draft Investigation and Feasibility Study. We also reviewed the draft ARARs analyses (Enclosures 2 and 3) which were included with the Navy's February 17, 1995 letter to you. We appreciate the fact that the Navy did a thorough analysis of our ARARs. Since Enclosures 2 and 3 have identified most of our ARARs, the following comments will focus on these two documents only to the extent where clarification or correction is required.

1. **Enclosure #2**

Section 2.1.2 (and other sections with reference to the Basin Plan)

All references to the "1994" Water Quality Control Plan for the Santa Ana River Basin (Basin Plan) should be changed to "1995". The 1995 Basin Plan has been approved by the State Office of Administrative Law. Please change the last two sentences on Page 4, first paragraph, to reflect this approval.

Section 2.1.2, last sentence of the section, Page 6

Reinjection of the groundwater will contribute total dissolved solids (TDS) and nitrates to the basin. However, as the concentration of TDS and nitrates in the reinjection water is expected to be the same as the groundwater, the concentrations of TDS and nitrates in the groundwater will not significantly change. Also, the TDS and nitrate levels in the local groundwater and treated reinjection water may not be consistent with the water quality objectives specified in the Basin Plan. However, we do recognize the fact that the high TDS and nitrate levels at the site may not be due to past operations at the MCAS El Toro site, and therefore, requiring cleanup of these constituents beyond background levels may not be appropriate.

Section 2.1.3, last paragraph on Page 6

We think that for both Alternatives 2a. and 5a., the antidegradation policy is applicable especially if the treated water is reinjected outside the contaminant plume. If the treated water is reinjected within the contaminant plume in compliance with our established treatment standards, it would not result in degradation of water quality and an antidegradation analysis is not necessary for those constituents that are above the water quality objectives. For all other constituents, an antidegradation analysis is required.

Section 2.2.1, Page 7

Remedial action objectives for the groundwater must be reconsidered in light of SWRCB Resolution No. 92-49. The remedial action objectives must be the lowest levels that are technically and economically achievable, and at a minimum, must attain the MCLs.

Section 2.2.3, next-to-last paragraph on Page 8

Since the exact location of reinjection has not been determined, it may be premature to state that Alternatives 2a. and 5a will improve the overall water quality in the area. If the proposed reinjection is outside the contaminant plume, the discharge may not improve the existing quality of the receiving waters. Furthermore, treatment to MCLs for reinjection outside the contaminant plume would not comply with SWRCB Resolution No. 68-16's requirement that the discharge meet best practicable treatment or control.

Section 2.2.4, Page 9

Substantive provisions of a permit are applicable or relevant and appropriate requirements, not TBCs.

Enclosure #3

Section 2.1, last sentence of the section, Page 2 (and Section 2.4, Page 3)

Please note that the use of reclaimed water by The Irvine Company and the Irvine Ranch Water District are regulated by the Regional Board through water reclamation requirements. These reclamation requirements are consistent with the water quality objectives specified in the Basin Plan. Therefore, for any discharge of treated water to the reclamation system operated by these dischargers, we will not be specifying any additional requirements.

Section 2.3, Page 2

Dry washes are tributary to surface waters. Any discharge to surface water bodies, including tributaries, needs to be regulated under a NPDES permit. However, we recognize that under controlled conditions, it is possible to recharge treated water through dry washes without any discharge to surface water bodies. The ARARs identified in this section are only applicable if appropriate controls are in place to avoid any discharge to surface water bodies. Any action to dam the dry washes would require a Clean Water Act (CWA) Section 404 permit (off-site), and must meet conditions for CWA Section 401 Water Quality Certification.

Enclosure #2, Section 2.1.2, and Enclosure #3 Section 2.3

Please make it clear that for both recharge and reinjecion, TDS and nitrate levels for the discharged groundwater will not be above the levels in the receiving water if the receiving waters are above the water quality objectives for TDS and nitrates, and will comply with Resolution No. 68-16 if the receiving waters are below water quality objectives.

If you have any questions, please contact me at 909-782-4998.

mjadackapara
for
Lawrence Vitale
DoD Remedial Program Manager

cc: Ted Cobb, Office of the Chief Counsel, SWRCB, Sacramento
Joseph J. Joyce, BRAC Environmental Coordinator, Department of the Navy, Southwest Division, San Diego
Andy Piszkin, RPM, Department of the Navy, Southwest Division, San Diego
Rex Callaway, Associate Counsel (Environmental), Department of the Navy, Southwest Division, San Diego

mja/arars.et

ORANGE
COUNTY
WATER
DISTRICT

May 26, 1995

Juan M. Jimenez
Remedial Project Manager
Department of Toxic Substances Control
245 West Broadway, Suite 425
Long Beach, CA 90802-4444

Re: TDS Requirements for Reinjection
at Marine Corps Air Station, El Toro

Dear Mr. Jimenez:

I have been furnished with a copy of the Navy's suggested "applicable or relevant and appropriate requirements" (ARARs) for the cleanup at Marine Corps Air Station, El Toro. I have also received a copy of the comments of the California Regional Water Quality Control Board - Santa Ana Region on the proposed ARARs.

OFFICE OF THE
GENERAL MANAGER

On page 2 of the Regional Water Quality Control Board's comments, reference is made to Section 2.1.2 of the Navy's proposed ARARs. The statement is made that "the TDS and nitrate levels in the treated reinjection water may not be consistent with the water quality objectives specified in the basin plan." If this is the case, the ARARs should be changed to include a requirement that the injection water be treated until it does meet all Santa Ana River basin water quality objectives. Those objectives for TDS are 720 mg/l or 1000 mg/l and for nitrates are 6 or 8 mg/l, depending on where the injection points are located.

Our Legislature has wisely and carefully provided for the protection of water quality, by enacting a series of statutes designed to achieve, not undermine, water quality objectives. Water Code section 13000 declares that activities affecting the quality of the waters of the State

> "shall be regulated to attain the highest water quality which is reasonable, considering all demands being made and to be made on those waters and the total values involved, beneficial and detrimental, economic and social, tangible and intangible."

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Encl (3)

The State Board and Regional Boards must "conform to and implement" this policy when exercising powers granted to them under the Water Code, including developing waste discharge standards for reinjected water. Water Code section 13001. In fact, the Water Code specifically lists water quality objectives among the factors that must be considered when specifying waste discharge standards:

> "The regional board, after any necessary hearing, shall prescribe requirements as to the nature of any proposed discharge . . . with relation to the conditions existing . . . in the disposal area or receiving waters upon, or into which, the discharge is made or proposed. The requirements shall implement relevant water quality control plans, if any have been adopted, and shall take into consideration the beneficial uses to be protected, the water quality objectives reasonably required for that purpose, other waste discharges, the need to prevent nuisance, and the provisions of Section 13241." (Emphasis added.)

Section 13241, of course, is the section of the Water Code which requires the Regional Boards to establish water quality objectives. In this manner, the Water Code requires development of waste discharge standards which are protective of water quality objectives, and not, as would be the case with the Navy's proposed ARARs, development of standards which undermine those objectives and the associated beneficial uses.

The State Water Resources Control Board expressly recognized these statutory mandates in its Resolution No. 92-49:

> "The basis for regional water board decisions regarding investigation, and cleanup and abatement includes: . . . (3) applicable water quality control plans adopted by the State Water Board and Regional Water Boards, including beneficial uses, water quality objectives, and implementation plans . . ." (Emphasis Added.)

The Resolution goes further to implement this principle in Section II.A.9, where it requires that the Regional Water Board:

> "Prescribe cleanup levels which are consistent with appropriate levels set by the Regional Water Board for analogous discharges that involve similar waste, site

characteristics, and water quality considerations . . ."

Under similar circumstances, the Irvine Ranch Water District, which provides reclaimed water for irrigation purposes, is required to meet TDS objectives of the basin plan. The irrigation takes place in the same general area as it is proposed to discharge the treated water from the El Toro cleanup into the groundwater through injection wells. There is no reason to establish different standards for this treated water than have been established for the Irvine Ranch Water District treated water that is used for irrigation.

In the Rancho Caballero decision contained in State Water Resources Control Board Order No. 73-4, dated February 1, 1973, the State Board concluded that all treated discharges must meet basin objectives. This Order has governed discharges of treated wastewater in the Santa Ana region for over 20 years.

The State Board pointed out that under Water Code Section 13263, discharge requirements must implement relevant water quality control plans. The Board explained this as follows:

> "In adopting waste discharge requirements to implement the objectives contained in the [Water Quality Control] Plan, the Regional Board need not determine anew the beneficial uses to be protected, the water quality objectives reasonably required for that purpose or make findings regarding the provisions of Section 13241 [of the Water Code]. The Regional Board, in adopting the plan, has already taken these factors into consideration. The waste discharge requirements need only implement the provisions of the plan, reflect the fact that other discharges in the area will affect the quality of the receiving waters and insure that the requirements will not result in the creation of a nuisance." (Emphasis Added.)

The Board then went on to conclude that any discharge order in that particular area of the Santa Ana Region had to include a requirement for TDS which must not exceed 700 mg/l in accordance with the plan. Applying the same rule to the injection wells proposed for the El Toro cleanup, the relevant standard for TDS will be 720 mg/l or 1000 mg/l and 6 or 8 mg/l for nitrates, depending on where the water is injected. In accordance with State Water Resources Control Board Resolution No. 92-49 and the Rancho Caballero decision, the ARARs should include these standards.

It is undoubtedly a reflection of these mandates that Board staff have stated that the Board has authority to require best practicable treatment (BPT) technology to protect state waters from degradation. BPT requirements have been imposed pursuant to California's Non-Degradation Policy (Resolution 68-16) and California's Sources of Drinking Water Policy (Resolution 88-63). The Non-Degradation Policy requires discharges "to meet waste discharge requirements which will result in the best practicable treatment or control of the discharge necessary to assure that (a) a pollution or nuisance will not occur and (b) the highest water quality consistent with maximum benefit to the people of the State will be maintained." The Sources of Drinking Water Policy provides that all state groundwater is considered "potentially suitable for municipal or domestic water supply and should be so designated by the Regional Board."

The Navy previously took the position that the Non-Degradation Policy does not require cleanup of so-called "background" contaminants. That position ignores both the general mandates of the Water Code discussed above, and several specific orders of the State Board and decisions of the California Court of Appeals. These rulings make it clear that where water with "background" levels of contaminants is pumped and then released at a point where it impacts or threatens to impact cleaner waters, the background contaminants must be mitigated before the water is released. Specifically, I refer to In Re The Santa Clara Transportation Agency, State Board Order No. WQ#88-2. In that case a pumping system operated by the Santa Clara Transportation Agency intercepted a plume of contaminated groundwater containing "background" VOC's and transferred the water to the Matadero Canal, which flows into San Francisco Bay. In the absence of treatment of the background VOC's, the system would have had the effect of transferring contaminated groundwater in to the San Francisco Bay. To prevent this cross-contamination, the State Board found it was proper to require the treatment of the background pollutants.

This danger of transporting contamination into receiving waters also was at issue in Southern California Edison v. State Water Resources Control Board (1981) 116 Cal. App. 3d 751. There, the California Court of Appeals held that where contaminated water was to be extracted in one area and discharged into less polluted waters or in other environmentally sensitive waters located away from the extraction point, the Board properly required treatment to avoid contamination of the receiving waters. A similar result was ordered in Lake Madrone Water District v. State Water Resources Control Board (1989) 209 Cal. App. 3d 163, where the proposed discharge of impounded waters would have accelerated and increased particulate loading in the receiving waters.

As in those cases, the Navy's proposal would have the effect of moving or accelerating the movement of background contaminants (TDS and nitrates) into sensitive aquifers. Consequently, as in those cases where the discharge would have the effect of endangering the receiving waters, more stringent treatment standards are in order.

Finally, I note that it is not uncommon in Southern California for groundwater treatment standards to include provisions requiring treatment of background nitrates, in order to enhance the beneficial use of the reinjected water. As an example, I refer you to cleanup standards in place at the Glendale North and South Operable Units of the San Fernando Valley Superfund Site. The potentially responsible parties at those operable units are responsible for historic discharges of VOC's to groundwater. There is no indication that those PRPs are responsible for the presence of nitrates in the groundwater. Nonetheless EPA and the State of California have required treatment that removes not only the VOC's, but also the nitrates, so that the City of Glendale can take the treated groundwater for distribution and resale. Thus, there is local precedent for requiring nitrate removal from waters used as a drinking water supply.

If I can be of any further assistance to you on the ARARs, please let me know. If you will send me copies of any future correspondence pertaining to the cleanup at El Toro, I will return my comments at the earliest possible time in order that the ROD may be completed in a timely fashion.

Very truly yours,

William R. Mills Jr.
General Manager

cc: William A. Dos Santos, Commander, CEC, U.S. Navy
Lawrence Vitale, DOD Remedial Program Manager
California Regional Water Quality Control Board - Santa Ana Region
William R. Attwater, Chief Counsel
State Water Resources Control Board
Ms. Karen A. Goldberg, Assistant Regional Counsel
U.S. Environmental Protection Agency
William Miller, Pillsbury Madison & Sutro

APPENDIX A
MCAS El Toro Schedule

Deliverable or Milestone	Negotiated Completion Dates	
Operable Unit 2A		
Draft RI/FS Work Plan	N/A	
Phase I Technical Memo	N/A	
Draft Phase II Work Plan	20-Mar-95	
Start Phase II Fieldwork	20-Jul-95	
Draft RI Report	20-Feb-96	
Draft FS Report	20-Jun-96	
Draft Proposed Plan	20-Oct-96	
Draft Record of Decision	20-Jan-97	*
Operable Unit 2B		
Draft RI/FS Work Plan	N/A	
Phase I Technical Memo	N/A	
Draft Phase II Work Plan	20-Mar-95	
Start Phase II Fieldwork	20-Jul-95	
Draft RI Report	20-Mar-96	
Draft FS Report	20-Jul-96	
Draft Proposed Plan	20-Nov-96	
Draft Record of Decision	20-Feb-97	*
Operable Unit 2C		
Draft RI/FS Work Plan	N/A	
Phase I Technical Memo	N/A	
Draft Phase II Work Plan	20-Mar-95	
Start Phase II Fieldwork	20-Jul-95	
Draft RI Report	20-Apr-96	
Draft FS Report	20-Aug-96	
Draft Proposed Plan	20-Dec-96	
Draft Record of Decision	20-Mar-97	*
Operable Unit 3		
Draft RI/FS Work Plan	N/A	
Phase I Technical Memo	N/A	
Draft Phase II Work Plan	20-Mar-95	
Start Phase II Fieldwork	20-Jul-95	
Draft RI Report	20-Nov-96	
Draft FS Report	20-Mar-97	
Draft Proposed Plan	20-Jul-97	
Draft Record of Decision	20-Oct-97	*
Sites 4 and 13		
Issue Draft EE/CA	20-May-95	
Prepare Action Memos	20-Jun-95	
Issue Final Action Memos	20-Oct-95	
Issue Final EE/CA	20-Dec-95	
Start Fieldwork	20-Apr-96	**
Phase III Workplan****	20-Mar-97	**
		**
Sites 7, 11, 14, 19, 20		**
Issue Draft EE/CA	20-Jul-95	**
Prepare Action Memos	20-Oct-95	
Issue Final Action Memos	20-Mar-96	
Issue Final EE/CA	20-Aug-96	
Start Fieldwork	20-Aug-96	**
Phase III Workplan****	20-Jul-97	**
		**

Deliverable or Milestone	Negotiated Completion Dates
Operable Unit 1	
Phase I Tech Memo	7-May-93
Draft Phase II Workplan	9-Nov-93
Draft RI	30-Dec-94
Draft IAFS	15-Oct-95
Draft Proposed Plan	18-Dec-95
Draft Interim Record of Decision	31-May-96
Draft Longterm GWM Workplan	20-Feb-97

* These completion dates are target dates(not enforceab **

** Removal Actions not controlled by the Federal Facility **

*** Major Draft documents are staggered at least 30 days

**** At minimum a Technical Memorandum documenting the removal action completed, evaluating the success, and specifying the next step at the site.

Encl (4)