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MCAS EL TORO
SSIC # 5090.3

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."

MAILING ADDRESS:
P.O. BOX 8300
FOUNTAIN VALLEY
CA 92728-8300

10500 ELLIS AVENUE
FOUNTAIN VALLEY
CA 92708

PHONE (714) 378-3200
FAX (714) 378-3371

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]. <u>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</u>, 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