

DEPARTMENT OF TOXIC SUBSTANCES CONTROL *MCC*M60050.000751
MCAS EL TORO
SSIC # 5090.3Region 4
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April 11, 1994

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 Department of the Navy
 Southwest Division
 Naval Facilities Engineering Command
 Environmental Division
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Dear CDR Dos Santos:

**RESPONSE TO THE REQUEST FOR THE IDENTIFICATION OF STATE
 APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS (ARARs) FOR
 THE REMEDIAL INVESTIGATION/FEASIBILITY STUDY (RI/FS) FOR OPERABLE
 UNIT (OU)-1 AT MARINE CORPS AIR STATION, EL TORO**

As indicated in your letter dated March 4, 1994 (received March 9, 1994), the California Department of Toxic Substances Control (DTSC) supplied the Navy with a list of potential state ARARs in March 1991. As part of the process and in accordance with §7.6 of the Federal Facilities Agreement (FFA), DTSC had contacted, in writing, those state and local governmental agencies that were a potential source of ARARs. DTSC also notified 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. Nevertheless, DTSC, as the point of contact for the State of California, has reviewed the list of agencies that failed to respond and has determined that they would be unlikely sources of ARARs for OU-1 (see caveat in later section).

You also indicated in a letter dated May 13, 1993, that the Navy requires a more specific identification of state ARARs. A review of that letter indicates that you requested chemical-specific and location-specific ARARs for OUs 1 through 3, and in addition, action-specific ARARs for OU-1. While DTSC did not provide a written response to your request at that time, we did communicate our reasons for not doing so, in a timely manner, to the then BRAC Environmental Coordinator, Andy Piszkin. Our reasons, indicating your request was premature, were/are:

- Action-specific ARARs (OU-1)

Title 40 of the Federal Code of Regulations (40 CFR) §300.515(d) states that support agencies shall identify and communicate ARARs no later than the early stages of



the comparative analysis described in §300.430(e)(9), namely, the Feasibility Study (FS). As you are aware, the primary objective of the FS is to ensure that appropriate remedial alternatives are developed and evaluated. It was not until recently, i.e. late January 1994, that a list of draft alternatives for OU-1 was presented to the El Toro BRAC Cleanup Team (BCT), thus enabling the identification of action-specific ARARs. Therefore, our response in this communication is appropriately timely.

- Chemical- and location-specific ARARs (OU-1)

In identifying chemical- and location-specific ARARs for OU-1, DTSC is concerned whether adequate site characterization data are actually available. Namely, only two rounds of on-Station groundwater monitoring data have been collected to date, in spite of the fact that the installation of groundwater monitoring wells as part of the Phase I RI effort was completed over a year ago. This issue became more serious when significant discrepancies were found between the two rounds of data. Our concern over the inadequacies of these two rounds of groundwater monitoring data has been repeatedly expressed at monthly Remedial Project Manager (RPM)/BCT meetings. It is our understanding that a Groundwater Monitoring Plan will be submitted for agency review in April or May 1994; purportedly the plan will propose the timing and frequency of future groundwater monitoring events.

Furthermore, DTSC is concerned that a significant number of groundwater samples, i.e. those samples collected from wells with constant speed pumps, may not have been representative samples. DTSC observed field sampling procedures and found that the groundwater samples were being aerated during collection, compromising the validity of volatile organic compound (VOC) results. DTSC expressed these concerns in a letter to Andy Piszkin, dated August 27, 1993.

In summary, we are concerned that all possible constituents of concern for OU-1 have not been identified. We do want to point out that this issue has been partially resolved by a recent consensus reached at a February 8-10, 1994 RPM/BCT meeting; 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.

- Chemical- and location-specific ARARs (OUs-2 and -3)

Because the Navy at this time has not yet presented cleanup alternatives for OUs-2 and -3, it is not appropriate to identify and evaluate chemical- and location-specific ARARs for OUs-2 and -3 based on the limited information obtained from the Phase I RI investigation. The El Toro BCT is planning a revision of the Phase II RI Work Plan; however, it is likely that the Phase II RI results may not be available for over a year.

DTSC is providing the following information to identify chemical-, location- and action-specific ARARs for OU-1. DTSC is providing these potential ARARs with the caveat that the following are not addressed:

- 1) soil cleanup levels to determine the degree to which contaminated soils should be cleaned so that they do not threaten to adversely impact existing and probable future beneficial uses of waters of the state (this issue will be addressed in the ARARs for OUs-2 and -3),
- 2) the discharge (to a surface water body, including discharge to a sanitary sewer system) or irrigation or recharge/reinjection of treated or partially treated groundwater because such alternatives have not been proposed for the FS,
- 3) water quality design standards required by the Irvine Ranch Water District, the Orange County Water District (OCWD), or other water purveyor and/or drinking water quality regulatory agency to supply the treated groundwater as a potable water supply, including monitoring requirements (e.g., requirements specified in Title 22 of the California Code of Regulations [22 CCR], Division 4, Article 5.7),
- 4) disposal standards for brine generated by reverse osmosis (RO) and/or electro dialysis (EDR),

- 5) permits required by local and/or state governmental agencies (e.g., by the City of Irvine or the California Department of Health Services),
- 6) standards applied to the construction or destruction of water wells (State of California Department of Water Resources (*Water Well Standards*, Bulletin 74-90), and
- 7) regulations to assure safe and healthy working conditions during construction activities (Occupational Health and Safety Act [California Labor Code, Division 5, §6300 et seq.]).

Moreover, in accordance with United States Environmental Protection Agency (USEPA) 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 USEPA, 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

Chemical-specific ARARs are usually health- or risk-based numerical values or methodologies used to determine acceptable concentrations of chemicals that may be found in or discharged to the environment.

The chemical-specific ARARs for OU-1 are federal drinking water standards and those state drinking water standards that are more stringent than federal requirements. State Maximum Contaminant Levels (MCLs), while not directly applicable to groundwater cleanups, are relevant and appropriate requirements in cases where groundwater is or may be directly used for drinking water, in which case the MCLs should be met in the groundwater itself. State MCLs are incorporated into State Water

Resources Control Board (SWRCB) and Regional Water Quality Control Board (RWQCB) Water Quality Control Plans as water quality objectives for protection of current and potential sources of drinking water.

The SWRCB and the RWQCB derive their statutory authority from the Porter-Cologne Water Quality Control Act (Porter-Cologne) which is codified in Division 7 of the California Water Code and implemented through Title 23 of the California Code of Regulations (23 CCR). The California Water Code authorizes the SWRCB and RWQCB to establish, in Water Quality Control Plans (often called Basin Plans), beneficial uses and numerical and narrative standards to protect groundwater quality. The numerical and narrative water quality standards are promulgated and therefore ARARs. For example, SWRCB Resolution No. 68-16 (Non-Degradation Policy) contains the standard that all discharges to high quality waters must use the "best practicable treatment or control" to avoid pollution or a nuisance and to maintain water quality. The goal is to treat to background levels, but if background levels cannot feasibly be attained, then to the lowest concentrations technically and economically feasible. Please note that the requirements under Porter-Cologne could also be action- or location-specific ARARs; requirements under the Non-Degradation Policy could also be action-specific ARARs.

We provide below the state MCLs (22 CCR §64444.5) for the constituents detected in groundwater as indicated by your March 4, 1994 letter. Please note that the following list identifies the state MCLs for the detected constituents and does not necessarily identify state MCLs that are more stringent than the federal requirements.

| <u>Detected Constituent</u> | <u>State MCL (mg/l)</u> |
|-----------------------------------|-------------------------|
| Benzene | 0.001 |
| Carbon Tetrachloride | 0.0005 |
| Chloromethane (Methyl Chloride) | NA ¹ |
| 1,2-Dichloroethane (1,2-DCA) | 0.0005 |
| 1,1-Dichloroethylene (1,1-DCE) | 0.006 |
| cis-1,2-Dichloroethylene | 0.006 |
| trans-1,2-Dichloroethylene | 0.01 |
| Ethylbenzene | 0.680 |
| Tetrachloroethylene (PCE) | 0.005 |
| Toluene | NA ^{1,2} |
| 1,1,2-Trichloroethane (1,1,2-TCA) | 0.032 |
| Trichloroethylene (TCE) | 0.005 |
| Xylenes | 1.750 ³ |

¹State MCL is not available; the constituent is unregulated. Monitoring is required for all community and non-transient, non-community water systems.

²See "To Be Considered (TBC) Criteria", page 9.

³MCL is for either a single isomer or the sum of the isomers.

In addition, we are also providing the state MCLs for possible degradation/transformation products from the detected constituents.

| <u>Possible Degradation/ Transformation Product</u> | <u>State MCL (mg/l)</u> |
|---|-------------------------|
| 1,1-Dichloroethane (1,1-DCA) | 0.005 |
| Vinyl Chloride (VC) | 0.0005 |

Please note that state MCLs are also promulgated for inorganic chemicals (22 CCR §64435), some of which were detected in groundwater at or downgradient from MCAS El Toro. It has not been ascertained with certainty that MCAS El Toro is responsible for contributing these inorganics to the regional groundwater contamination. Examples of potentially relevant and appropriate state MCLs for inorganics are:

| <u>Detected Constituent</u> | <u>State MCL (mg/l)</u> |
|-------------------------------|-------------------------|
| Nitrate (as NO ₃) | 45 |
| Selenium | 0.01 |

Resolution 88-63, which is incorporated into RWQCB Water Quality Control Plans, states that, with few specific exceptions, all groundwaters of the state are to be considered existing or potential sources of drinking water. The identification of the OU-1 aquifers as potential drinking water sources forms the basis for selection of MCLs and Resolution 68-16 as specific ARARs to maintain existing high quality waters.

ACTION-SPECIFIC ARARs

Action-specific ARARs are usually technology- or activity-based requirements or limitations on actions taken with respect to hazardous wastes. These requirements are triggered by the particular remedial activities that are selected to accomplish a remedy.

Division 3 of 23 CCR contains regulations adopted by the SWRCB for the purpose of implementing certain provisions of the California Water Code. Chapters 15 and 16 of Division 3 contain potential ARARs for MCAS El Toro. Chapter 15 contains regulations governing discharges of waste to land where water quality could be adversely affected, e.g., from leaking waste management units such as landfills. Phase I RI results indicate that at least one landfill at MCAS El Toro is releasing contaminants to groundwater; however, the landfills are not currently included in the definition of OU-1. The regulations in Chapter 15 could be both action-specific and location-specific ARARs. Chapter 16 regulations are intended to protect waters of the state from discharges of hazardous substances from underground storage tanks (USTs). The definition of OU-1 focuses on constituents, primarily chlorinated VOCs, that have migrated from sources at the southwestern quadrant of MCAS El Toro. However, the detected constituents include contaminants such as benzene, toluene, ethylbenzene and xylenes (BTEX constituents) associated with releases of fuels. The presence of BTEX constituents is likely a result of fuel releases from USTs. The regulations in Chapter 16 could be chemical-specific and action-specific ARARs.

The Water Quality Control Plan (Santa Ana River Basin), as well as the California Water Code, provide the basis for development of reporting, notification, and monitoring programs during the Remedial Design/Remedial Action (RD/RA) phase.

Direct discharge of air stripping tower emissions into the atmosphere must comply with South Coast Air Quality Management District (SCAQMD) regulations. The cumulative carcinogenic risk to human health predicted from the inhalation of VOCs due to the direct discharge of air stripper emissions must be below the level of 1×10^{-6} excess cancer risk, per SCAQMD Rule 1401. During the design of the remedy, the appropriate agencies/entities should coordinate with SCAQMD to ensure that any direct discharge is also in compliance with the SCAQMD Rule 1303: cumulative air stripper emissions at a facility greater than 1 lb/day trigger requirements for best available control technology, modeling and emission off-sets. Emission levels during the design phase should be measured to ensure compliance with SCAQMD Rule 1303. SCAQMD Rule 402 prohibits the discharge of odorous or injury-causing emissions. In addition, SCAQMD Rule 212 requires distribution of a public notice to each address within a 1/4 mile radius of the project for any significant project.

CERCLA states that no federal, state, or local permit shall be required for any "removal or remedial action conducted

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entirely onsite, where such remedial action is selected and carried out in compliance with this section" (CERCLA §121(e), 42 U.S.C. §9621(e)). In other words, if the transport, storage, treatment or disposal of the hazardous substance, pollutant, or contaminant is carried out onsite, no permit is required; however, if the hazardous substance is transported, stored, treated, or disposed of offsite, then appropriate federal, state and local permits are required. Please see the definition of "onsite" contained in 40 CFR §300.400(e).

The Hazardous Waste Control Act (California Health and Safety Code [H&SC] §25100-25395) and 22 CCR, as administered by DTSC, contain many elements that are intended to control hazardous waste from their point of generation through accumulation, storage, transportation, treatment and disposal.

Use of activated carbon to control air stripping off-gases could trigger requirements associated with the storage, transportation, regeneration and/or disposal of spent carbon. Regeneration of spent carbon may be considered recycling under state hazardous waste regulations and statutes (California H&SC §25143.2). Generation, storage and transportation of hazardous waste for recycling must comply with requirements of 22 CCR §66266.3-12.

If spent carbon is determined a hazardous waste, then its generation and storage can trigger requirements specified in 22 CCR §66262.10-43 and §66264, including possible storage facility closure requirements, and municipal or county hazardous material ordinances. Transportation of hazardous waste to an off-site location would trigger standards applicable to transporters of hazardous waste (22 CCR §66263.10-46). Disposal of contaminants can trigger land disposal restrictions (22 CCR §66268.1-124).

The California H&SC, in Division 20, Chapter 6.95, requires businesses that handle hazardous materials to establish a plan for emergency response to a release or threatened release of a hazardous material.

The City of Irvine has promulgated an ordinance (City Council Ordinance No. 89-21) regarding the emission of ozone depleting compounds. Please see the City of Irvine's response to our ARAR solicitation which was previously forwarded to you.

LOCATION-SPECIFIC ARARS

As defined in *Guidance for Conducting Remedial Investigations and Feasibility Studies Under CERCLA*, Interim Final (USEPA, 1988), location-specific ARARs are restrictions

placed on the concentration of hazardous substances or the conduct of activities solely because they are in specific locations. Some examples of special locations include floodplains, wetlands, historic places, and sensitive ecosystems or habitats.

22 CCR (§66264.18) requires that a hazardous waste storage and/or treatment facility be constructed at least 200 feet from an earthquake fault and if sited within a 100-year floodplain, that it be designed, constructed, operated and maintained to prevent washout of hazardous waste.

OCWD has completed an Environmental Impact Report (EIR) which concluded that the installation of off-Station Desalter Project equipment (well, piping and treatment plant locations) would not have an impact to cultural or biological resources, including the disruption of endangered or threatened species and their habitats. Any surface area disturbance associated with the selected remedy (including installation of on-Station equipment) should be evaluated for significant impacts.

TO BE CONSIDERED (TBC) CRITERIA

According to the *CERCLA Compliance with Other Laws Manual* (EPA 540/G-89/006), "to be considered" (TBC) criteria are non-promulgated advisories or guidance issued by federal or state government that are not legally binding and do not have the status of ARARs; however, in many cases TBCs will be considered along with ARARs as part of the site risk assessment and may be used in determining the necessary level of cleanup for protection of human health and/or the environment. In fact, DTSC is not aware of any ARARs, state or federal, which apply to risk assessment other than the requirement in the NCP that a risk assessment be performed. The USEPA guidance manual also states that:

"Chemical specific TBC values such as health advisories and reference doses will be used in the absence of ARARs or where ARARs are not sufficiently protective to develop cleanup goals. In addition, other TBC materials such as guidance or policy documents developed to implement regulations may be considered and used as appropriate, where necessary to ensure protectiveness."

Toxicity criteria, including cancer potency factors published by either the California Environmental Protection Agency (Cal/EPA) or USEPA, are not ARARs but are TBCs. Where differences occur between cancer potency factors published by

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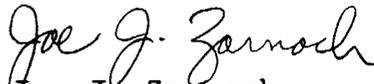
Cal/EPA and USEPA, we urge the Navy to seek the consensus advice of toxicologists and risk assessors of both DTSC and USEPA (Region IX) to resolve discrepancies.

In cases where no state MCL has been established for drinking water, state Action Levels serve as non-enforceable health-based guidance numbers and thus are TBCs. Of the detected constituents in groundwater, only chloromethane and toluene do not have state MCLs. Of these two, only toluene has a state Action Level (0.10 mg/l). State Action Levels for the other detected constituents and possible degradation/transformation products have been replaced by their respective MCLs.

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) 590-4878.

Sincerely,



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