

DEPARTMENT OF HEALTH SERVICES

TOXIC SUBSTANCES CONTROL DIVISION

REGION 4

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November 15, 1990

J. R. Faunce, CAPT, CEC, USN
Director Facilities Mgmt. Dept.
Marine Corps Air Station
El Toro (Santa Ana), CA 92709-5010

Dear CAPT. Faunce:

DRAFT REMEDIAL INVESTIGATION/FEASIBILITY STUDY WORK PLAN AT THE
MARINE CORPS AIR STATION EL TORO.

The Department of Health Services/Toxic Substances Control Program (DHS) has reviewed the above mentioned work plan submitted by Marine Corps Air Station El Toro (MCAS El Toro) for review and comments as required by the Federal Facility Agreement (FFA). The following comments are divided into general and specific:

General Comments

Given the schedule agreed to in the FFA, the approach taken by MCAS is very conservative and is not ambitious enough to characterize the site in the time given. The depths of most soil samples are not adequate to characterize the sites. If MCAS El Toro uses this work plan, a second phase of sampling will be too loaded with tasks that can be performed during this first phase. If this approach is selected by the base, it is pertinent to describe the objectives of the second phase of sampling, and how it is planned.

DHS feels that soil samples at strategic intervals should be collected and analyzed when groundwater wells are drilled. Since most of the releases happened several years ago, contaminants have migrated deeply into the unsaturated zone. Therefore, the depths of soil borings samples should be increased to adequately characterize adequately the migration of contaminants. Background soil samples should be collected at locations outside the base where no releases have possibly occurred. Locations for background soil samples at each individual site could be later determined based on the data obtained from the samples taken during on-base well installation.

Since the data obtained from the RI/FS will support engineering alternatives for remediation, it is imperative that the accuracy of site maps is confirmed in the field with some source of surveying/mapping.

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soil-gas surveys of sites considered potential sources of VOCs could supply valuable information about contaminated areas to prioritize efforts. These soil-gas surveys can be focused on areas located from aerial photographs searches. Inexpensive techniques like Ground Penetrating Radar and Electromagnetic surveys could be used to get a preliminary estimate of contaminated areas before mobilizing expensive drill rigs and their crews

The Department believes that this work plan could be divided into an exploratory stage to pinpoint soil borings sampling locations as well as depths, and install groundwater monitoring wells. Locations of these soil borings can be selected from soil-gas surveys, Ground Penetrating Radar, and Electromagnetic surveys results. A second stage will perform focused soil sampling based on results from the exploratory stage.

Specific Comments

Executive Summary, page I, second paragraph.

DHS feels that the RI itself might require more than two phases. Rewording of this paragraph may be necessary.

2.1 Site Location, page 2.

This section should include a more accurate description of the site location. It should include the latitude and longitude as well as the township, range and sections. It should include also some demographics.

Figure 2, Major surface water drainage channels.

This figure needs the North arrow.

Table 2, Review of Sources of Potential ARARs

This table is short of both Federal and State ARARs. Attached is a list of State ARARs. Whenever any other ARARs are discovered, DHS will submit them for inclusion on this list.

5.3.2.1 Groundwater sampling and analysis strategy, third paragraph, page 66.

From the text in this paragraph, it seems evident the disregard of the base for State MCLs. While EPA's MCL for vinyl chloride is 2 $\mu\text{g}/\text{l}$, State of California's MCL for that contaminant is 0.5 $\mu\text{g}/\text{l}$. Therefore, detection limits must be lower than the regulatory threshold and the most stringent MCLs should be taken into consideration when a remedial action is designed. Additionally, the list of both Federal and State MCLs should be included in some

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section of the workplan

5.3.2.4 Soil sampling and analysis strategy, page 67.

The rationale used to select the 2.5 and the 5.0 foot depth interval at each boring location does not address appropriately the contamination of soil. If 2.5 to 5.0 foot soil boring samples are to be used as a screening tool to determine the possible need to perform deeper soil borings, the result may be ineffective and expensive. DHS believes that to screen boring locations for volatile organics soil samples, soil-gas survey is an effective, and inexpensive way to accomplish better results that justify selection of boring locations.

From data in table 4 it can be summarized that deep soil contamination will not be characterized at eleven sites. At six out of those eleven sites only shallow soil samples will be collected. Furthermore, 25 foot soil borings could result in insufficient depth to characterize the migration of contaminants in soil. The Department believes that soil samples at strategic intervals should be combined with drilling of monitoring wells at every well. Additionally, readings from Organic Vapor Analyzer (OVA) documented on the well logs could help to select depths for future soil borings.

Table 5, Proposed laboratory analysis, page 70.

Soil samples at shallow depths should be collected and analyzed for dioxins at all sites where burning of waste has occurred (site 1, site 2, site 3, site 5, etc.). Also, soil physical properties analysis (Total Organic Carbon, Surface Area, Particle Size Distribution) should be performed to obtain data necessary for Exposure Assessment.

If you have any questions please contact me at (213) 590-4904.

Sincerely,



Manny Alonzo
Associate Hazardous Materials
Specialist
Site Mitigation

Enclosures

see next page for cc list

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STATE OF CALIFORNIA
 APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS

Chemical Specific	Citation	Description
Air Resources Act	H&S Code, Div. 26 3900 et seq.	Regulates both nonvehicular and vehicular sources of air contaminants in California. Defines relationship of the California Air Resource Board (ARB) and local regional air pollution control districts (APCD). Establishes Ambient Air Quality Standards. Establishes permit procedures.
Mulford-Carrett Air Resources Act	H&S Code, Div. 26, Sec. 39000-44563, CAC Title 17, Part 111	Establishes Ambient Air Quality Standards. Regulates both vehicular and nonvehicular sources of air contaminants in California. Section 93000 also identifies benzene and hexalent chromium as toxic air contaminants. However, no threshold values have been determined.
California Safe Drinking Water Act	H&S Code, Div. 5, Part 1, Chapter 7, Sec. 4010 et seq.	Regulations governing public water systems. Drinking Water Quality standards - Maximum Contaminant Levels (SMCLs). Requirements for water quality analysis and Laboratories.
Porter Cologne Water Quality Control Act	Water Code, Div. 7, Sec. 13000 et seq.	Establishes authority of the State and Regional Water Boards to protect water quality by regulating waste disposal and by requiring cleanup of hazardous conditions.
Santa Ana Regional Water Quality Control Board		Allowable treated water emissions are determined based on DHS action levels and best available technology (BAT).
Santa Ana Regional Water Quality Control Board	Water Quality Control Plan, Santa Ana River Basin	The objective of this plan is to show how the quality of surface and groundwater in the Santa Ana Region can be controlled to provide maximum benefit.
	Water Quality Objectives	Promulgated criteria setting chemical specific concentration levels for a variety of uses of specific bodies of water. Based on the beneficial uses of specific water bodies.
Central Valley RWQCB Designated Level of Methodology for Waste Classification and Cleanup Level Determination		This guidance document is in the tentative stage of development for use in the classification and subsequent disposal method of both hazardous and non-hazardous wastes.
Hazardous Waste Control Act	H&S Code, Div. 20 Chapter 6.5, Sec 25100 et seq.	Regulations governing hazardous waste control; management and control of hazardous waste facilities; classification of extremely hazardous, and non-hazardous waste.
Minimum Standards for Management of Hazardous and Extremely Hazardous Wastes	CAC, Title 22, Chapter 30	As administered by the Department of Health Services, Section 66300 of Chapter 30 provides no RCRA-type exemption for CERCLA sites.
Criteria for identifying Hazardous Waste	Title 22, Article 11, Sec 66693-66746	Tests for identifying hazardous characteristics are described in these Sections. If a chemical is either listed or tested and found hazardous, then it must comply with the hazardous waste requirements under Title 22.

Persistent and Bioaccumulative Toxic Substances	Title 22, Sec, 66699	Total Threshold Limit Concentrations (TTLCs) and Soluble Threshold Limit Concentrations (STLCs) have been established of selected toxics to be used in establishing whether waste is hazardous. If a chemical is either listed or tested and found hazardous, then it must comply with the hazardous waste requirements under Title 22.
Safe Drinking Water and Toxic Enforcement Act	H&S Code, Div. 20 Chapter 6.6 Sec. 25249.5 seq.	Prohibition on contaminating drinking water with specific carcinogens and reproductive toxics.
Fish and Game Regulations on Pollution	Fish and Game Code, Div. 6, Part 1, Chapter 2, Sec. 5650 et seq.	Codifies the prohibition of water pollution with any substance or material deleterious to fish, plant or bird life.
Water Quality Objectives	RWQCB Criteria	Promulgated criteria setting chemical specific concentration levels for a variety of uses of specific bodies of water. Based on the beneficial uses of specific water bodies.
State Action Levels	DHS Criteria	Criteria setting chemical specific concentration levels. Numerical limits are designed to protect human health from chemical constituents in drinking water. Recommended acceptable limits.
Hazardous Waste Control Act	H&S Code, Sec. 25100-25395, CAC Title 22, Chapter 30	Minimum Standards for Management of Hazardous and Extremely Hazardous Wastes. The HWCA has many elements that are intended to control hazardous wastes from their point of generation through accumulation, transportation, treatment, storage, and ultimate disposal.

Actions Specific

CA "Super Fund" Law - Hazardous Substances Account Act/Hazardous Substances Cleanup Bond Act	H&S Code, Div. 20, Chapter 6.8, 25300 et seq.	Establishes state authority to clean up hazardous substance release and compensate persons injured by exposure to hazardous substances. Created a \$100 million Hazardous Substances Cleanup fund to supplement the hazardous Substances Account.
Toxic Pits Cleanup Act	H&S Code, Div. 5, 6300 et seq.	Regulates the closure of surface impoundments containing hazardous waste.
Occupational Health and Safety Act	Labor Code, Div. 5, Sec. 6300 et seq.	Regulations to assure safe and healthy working conditions by authorizing the enforcement of standards and procedures.
Underground Storage of Hazardous Substances Requirements	H&S Code, Div. 20, Chapter 6.7, Sec. 25280 et seq.	Regulations governing the testing, monitoring and replacing underground storage tanks.

Location - Specific

Hazardous Waste Control Act	H&S Code 251000-25395, CA Title 22, Chapter 2-30	Minimum Standards for Management of Hazardous and Extremely Hazardous Wastes. Regulations governing surface impoundments, waste piles, landfills, and land treatment facilities.
Porter-Cologne Water Quality Act	Water Code 13000-13806 CAC Title 23 Subchapter 15, 1050-2836	CAC Title 23, Article 3 provides guidelines for Waste Management Unit Classification and Siting Article 3 states that new waste management units shall have a 200-foot setback from any known Holocene earthquake fault (55331(d), 5532(d), 5533(d)).

Class I and II units should not be located where porous soil could impair the ability of natural geologic materials to act as a barrier to vertical fluid movement (253(b)(1), 2532(b)(1)).

Requirements for Generators of Hazardous Wastes...	Title 22, Sec. 66470-99515	Requires that "an owner or operator who initiates a shipment of hazardous waste from a Transport, Storage, or Disposal (TSD) facility shall comply with the generator standards established under Article 6, Title 22 of the CAC. These standards include keeping manifests, submission of manifests to DHS within 30 days of shipment, preparation of a biennial report, and maximum 90 day accumulation time.
General Operation Requirements for Interim Status and Permitted Facilities	Title 22, 67100-67195	Describes requirements for general facility standards, preparedness and prevention, contingency plan and emergency procedures, manifest system, and environmental monitoring.
Closure and Postclosure of Interim Status and Permitted Facilities	Title 22, 67250-67262	Requires that the facility shall be closed in a manner that minimizes the need for further maintenance, and controls, minimizes, or eliminates postclosure escape of hazardous waste decomposition products to the ground or surface waters or the atmosphere. Where hazardous waste will remain after closure, postclosure care must continue for 30 years.
Tanks at interim Status and Permitted Facilities	Title 22, 67250-67262	Requires tank systems to meet design standards and provide for: containment and detection/monitoring of leaks, monitoring and inspection and proper closure procedures.
Land Disposal		
Surface Impoundments	Title 22, 67280-67318	Requires the owner or operator of a surface impoundment to install 2 liners and a leachate collection system. Monitoring/Inspection, Emergency/Contingency Plans, and Closure/Postclosure care must be provided.
Waste Piles	Title 22, 67340-67351	Provides for the same general requirements as surface impoundments. Construction of new or replacement landfill units onsite requires a liner of acceptable material strength and engineering design, a leachate collection system immediately above the liner, monitoring and inspection, and closure/postclosure care.
Land Treatment	Title 22, 67360-67382	Hazardous constituents shall be degraded, immobilized, or transferred within the treatment zone, treatment must be demonstrated, design criteria must be met, and unsaturated soil zone must be established.
Incineration	Title 22, 67450-67468	Requires that the waste feed analyzed for constituents listed in the permit is within the limits of the permits. Where a permit is not required, the contents of such a permit should be estimated. Requires performance standards and monitoring of various parameters during operation of the incinerator. At closure, requires the owner or operator to remove all hazardous waste and hazardous waste residues.

Hazardous Waste Hauler Registration	Title 22, 66420-66465 and 66530-66564	Hazardous waste must be transported by a hauler registered by the state. Applicable to redispisal of waste Applicable to redispisal of waste as well as disposal of incineration ash if these materials are hazardous.
South Coast Air Quality Management District Rules and Regulation	Regulation IV	Prohibitory Rules
	Rule 401	Visible emission. Limits visible emissions form any point source.
	Rule 402	Nuisance. Prohibits the discharge of any material (including odorous compounds) that causes injury, or annoyance to the public, property, or business or endangers human health, comfort, repose or safety.
	Rule 403	Fugitive Dust. Limits onsite activities so that the concentration of fugitive dust at the property line shall not be visible and the downwind particulate concentration shall not be more than 100 micrograms per cubic meter, averaged over 5 hours, above the upwind particulate concentration.
	Rule 404	Particulate Matter (Concentration). Rule 404 (1) limits particulate emission to a range of 0.010 to 0.196 grain per standard cubic foot averaged over 1 hour for a volumetric gas flow rate of 7000 cu. m/hr ot 23 cu.m/hr, respectively.
	Rule 407	Liquid and Gaseous Air Contaminants limits carbon monoxide emissions to 2,000 ppm and sulfur dioxide emission to 500 ppm averaged over 15 minutes.
	Rule 409	Combustion Contaminants. Limits the emission of particulate matter from a combustion source.
	Rule 473	Disposal of Solid and Liquid Wastes. Incineration design to dispose of combustibile refuse at burning rates greater than 50 kilograms per hour shall not release particulate matter in excess of 0.23 grams per cubic meter of gas calculated to 12 percent of carbon dioxide.
	Rule 474	Fuel Burning Equipment Oxides of Nitrogen. Limits the concentration of oxides of nitrogen (as NO3) to a range of 125 to 300 ppm for gaseous fuels depending on the size.
Standards of Performance for New Stationary Sources	Regulation IX	Implements the provisions of Part 60, Chapter I, Title 40, of the CFR under the supervision of SCAQMD Executive Officer.
National Emission Standards for Hazardous Waste Air Pollutants	Regulation IX	Implements the provisions of Part 60, Chapter I, Title 40, of the CFR under the supervision of SCAQMD Executive Officer., if contaminants are listed.
Source Specific Standards	Regulation IX	Rule 1150 - " Executive of Landfill Sites " states that no person shall initiate excavation of an active or inactive landfill without an Excavation Management Plan approved by the SCAQMD. The plan shall provide information regarding the quantity and characteristics of the material to be excavated and transported and shall identify mitigation measures including gas collection and disposal, bailing, encapsulation, covering of the material, and chemical neutralizing.

New Source Review

Regulation XIII

This regulations sets forth the preconstruction review requirements for new or modified stationary sources, to ensure that the operation of such stationery sources does not interfere with the progress in attainment of the national air quality standards, without unnecessarily restricting the future economic growth within the district.

Proposed Rule 223

This proposed rule specifies the method to determine the impacts of emissions from new stationary sources and modifications to existing stationary sources. The provisions of this rule shall apply to preconstruction review of sources that emit carcinogenic air contaminants such as benzene.

Rule 1166

This rule limits the emission of VOCs from soil contaminated with VOCs as a result of leakage from storage or tranfer facilities from accidental spills, or other deposition.

Hazardous Waste Movement Committee Memorandum of Understanding

An agreement made on November 8, 1983 by the DHS, Caltrans, and the CHP.

An agreement between the Department of Health Services, Transportation (Calstrans), and the California Highway Patrol (CHP) to coordinate with each other for the transportation of large quantities of hazardous wastes excavated from abandoned sites.

State of California Department of Water Resources

Water Well Standards, Bulletin 74-81, 1989 or Draft 1990

This document sets standards to be applied to the construction or destruction of water wells throughout the State of California

California Environmental Quality Act

California Public Resources Code, 21100 et seq.

Requires either Environmental Impact Reports or Negative Declarations for cleanups, Interim Remedial Measures, and occasionally, parts of some Remedial Investigations and Feasibility Studies.