

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD

SAN FRANCISCO BAY REGION  
2101 WEBSTER STREET, SUITE 500  
OAKLAND, CA 94612  
(510) 286-1255



Mr. Stephen Chao  
WestDiv Engineer in Charge  
Western Division  
Naval Facilities Engineering Command  
900 Commodore Way, Bldg. 101  
San Bruno, CA 94066-0720

May 6, 1994  
File No. 2189.8009 [EA]

**Subject: Regulatory Agencies Position on the Selection Criteria for the Phase I Ecological Assessment**

Dear Mr. Chao:

On May 6, 1994 a telephone conference call was held between Moffett Field Remedial Project Managers (RPMs) from the US EPA and Cal-EPA agencies, and ecological technical support staff to discuss the different approaches for selecting chemicals of potential concern (COPC) as outlined on Table 2 of the April 20, 1994 memorandum from the Navy.

Table 2 presented the criteria recommended by the agencies and the criteria utilized by the Navy in the Draft Phase I Site-Wide Ecological Assessment for comparison. It should be noted that the Agency criteria was not accurately reflected in two sections of the Table. These sections are as follows: 1) Scott thesis data may be used for risk management decisions in phase II for inorganics only, not organics as stated, and 2) the Agencies did not state that polynuclear aromatic hydrocarbons (PAHs), ubiquitous in the environment, and/or not above literature derived no-observed-effects levels can be screened, or that sampling errors could exclude compounds.

The Agencies reached a consensus on the screening criteria to be utilized in the Phase I Site-Wide Ecological Assessment. Agency acceptance of the Draft Final Phase I Site-Wide Ecological Assessment will be dependent on the Navy's implementation of these screening criteria.

**SOIL - UPLAND TERRESTRIAL ENVIRONMENT:**

Inorganics: Concentrations equal to or less than the established background (1993) may be excluded from the list of COPC. The beryllium exclusion is acceptable based on the statistical comparison with background (IT,1993). What are the six metals excluded due to distribution? If these metals are typically not associated with hazardous waste, such as sodium, iron, calcium, potassium, manganese and silicon then exclusion is acceptable. If not, then the inorganic must be retained for the phase II assessment.

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### Organics:

Landfills: The acceptable criteria are: 1) the retention of all PCBs and pesticides detected, 2) common laboratory contaminants can be screened with documentation according to Part A of EPA RAGS guidance, 3) all organic compounds detected in more than one sample, including PAHs, must be retained. The use of the Menzie document to screen PAHs is not acceptable for ecological risk assessments. The data compiled for the Menzie paper is not specific for either the individual PAHs or the Bay Area, and is assessing risks to humans and not ecological receptors.

Non-Landfill Upland Areas: In general the Navy criteria were accepted with specific modifications and clarifications. The criteria are: 1) the potential for receptor exposure based on the depth of the sample location, 2) common laboratory contaminants can be screened with documentation according to Part A of EPA RAGS guidance, 3) chemicals will be retained when the distribution is indicative of a potential sink or source and 4) chemicals detected in 5% or less of the total samples at a site can be screened. The change from 10% to 5% follows EPA guidance for risk assessments. The Navy included in their criteria an evaluation of the representative mean concentration. The agencies need further clarification on this criteria, however the mean concentration will be dependent on the detection limits, and we would require the Navy to present the distribution of detection limits and frequency of detections in order to evaluate the application of this criteria.

### **GROUNDWATER AND SURFACE WATER:**

Inorganics: The use of the Ambient Water Quality Criteria (AWQC) as the primary benchmark for screening is acceptable. However, the Navy must be sure to use the most protective value and should use the shallow water effluent limitations from the San Francisco Bay Water Quality Control Plan, Table IV-1A, if those values are more protective than AWQC values. Use of the groundwater background values for the A1 aquifer are acceptable when there is no AWQC or Water Quality Control Plan value available.

Organics: The use of AWQC as the primary benchmark for screening organics is acceptable. When AWQC values are not available then the magnitude and the frequency of detections, not persistence, of the chemical may be evaluated. Though a chemical may not bioaccumulate, it may still cause direct toxicity and must be evaluated.

### **SEDIMENTS:**

Inorganics: The agencies have agreed that the McDonald's effects range low (ERL) must be used as the primary screening tool for inorganics in sediment. The use of background values for soils as a screening criteria is not appropriate for sediments.

Organics: The following screening criteria are presented in the order that they should be implemented: 1) comparison of values to McDonald ERLs, 2) if the frequency of detections at a site are less than 5% the chemical can be eliminated (distribution of detection limits must be evaluated) 3) common laboratory contaminants can be screened with proper documentation according to US EPA RAGS guidance, 4) concentrations of chemicals that do not exceed literature derived NOELs may be excluded and 5) distribution of chemicals that appear to indicate a source or chemical sink should be retained.

As discussed at the RPM meeting on May 3, 1994, the agencies have special concern regarding the screening of the PAHs in sediments at Moffett Field and the high detection limits for those samples. The example summary table, provided by Laura Valoppi of DTSC, should be produced to present the distribution of detection limits and frequency of detections compared to the McDonald values. The screening criteria used to eliminate PAHs from further evaluation must be included with the table. All PAHs that are retained for phase II of the ecological assessment must be evaluated as a mixture. Phase II assessment must determine risk on the sum of all the PAHs retained from the phase I screening. If this exercise shows no risk from the PAHs, a verification step will be required. This verification can be either a bioassay or resampling sediments in areas of high petroleum contamination for PAHs with EPA Method 8310 which has the ability to reach lower detection limits. If confirmation steps show that there is no risk from the mixture of PAHs then no action is required.

If you have any questions regarding these screening criteria, please call Mike Gill, Joseph Chou or Elizabeth Adams. The agencies communicated many of these same criteria to the Navy during our meeting on April 1, 1994. We are anxious to come to a resolution of these matters with the Navy and allow the project to move forward.

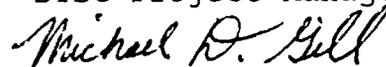
Sincerely,



Elizabeth J. Adams  
RWQCB Project Manager



Joseph Chou  
DTSC Project Manager



Michael Gill  
US EPA Project Manager

cc: Michael Gill, US EPA  
Mail Stop H-9-2

Joseph Chou, DTSC