

DEPARTMENT OF TOXIC SUBSTANCES CONTROL

Region 4
245 West Broadway, Suite 425
Beach, CA 90802-4444
590-4868

CODE 13

1995 NOV 27 PM 12:47

November 20, 1995

Mr. Phyl Dyke
Base Environmental Coordinator
Southwest Division
Naval Facilities Engineering Command
1220 Pacific Highway
San Diego, California 92132-5181

Dear Mr. Dyck:

COMMENTS ON BOAT CHANNEL SEDIMENT STUDY DRAFT WORK PLAN, NAVAL TRAINING CENTER, SAND DIEGO

The California Department of Toxic Substances Control (DTSC) and the Regional Water Quality Control Board (RWQCB) has completed its review of the *Boat Channel Sediment Study Draft Work Plan (Draft Work Plan)*, Naval Training Center (NTC) San Diego, dated October 6, 1995, for NTC San Diego. The *Draft Work Plan* was prepared for SouthWest Division Naval Facilities Engineering Command by Bechtel National, Inc.

This version of the *Draft Work Plan* addresses all previous comments made on the initial *Draft Work Plan*. The major portions requiring revision or clarification are the exposure period and measurement endpoints for the aquatic toxicity tests and the criteria used to construct the sediment decision matrix. Once these comments are addressed, the *Draft Work Plan* should provide a sediment evaluation sufficient to assess the potential ecological threat to benthic biota posed by sediments in the NTC Boat Channel.

DTSC has compiled comments on this document from its internal technical staff and the RWQCB which are enclosed with this letter. If you have any questions regarding this letter, please contact me at (310) 590-5565.

Sincerely,

Alvaro Gutierrez
Base Closure Team Member
Region 4 Base Closure Unit
Office of Military Facilities

Enclosure

cc: next page



Mr. Phyl Dyke
November 20, 1995
Page 2

cc: Ms. Alice Gimeno (R4-4)
Region 4 Base Closure Unit
Office of Military Facilities
Department of Toxic Substances Control
245 West Broadway, Suite 350
Long Beach, California 90802-4444

Ms. Celeste Albanez (R4-4)
Public Participation Specialist
Region 4 Base Closure Unit
Office of Military Facilities
Department of Toxic Substances Control
245 West Broadway, Suite 350
Long Beach, California 90802-4444

Mr. Thomas Machiarelli
Remedial Project Manager
Southwest Division
Naval Facilities Engineering Command
1220 Pacific Highway
San Diego, California 92132-5181

Mr. Correy M. Walsh
San Diego Regional Water Quality Control Board
9771 Clairemont Mesa Boulevard, Suite B
San Diego, California 92124-1331

Mr. Clarence Callahan, Ph.D.
U.S. EPA (H-9-3)
75 Hawthorne Street
San Francisco, California 94105

Ms. Laurie Sullivan
NOAA Coastal Resources Coordinator
c/o U.S. EPA (H-9-5)
75 Hawthorne Street
San Francisco, California 94105

GENERAL COMMENTS

Overall the work plan is well written and accurately incorporates discussions between U.S. Navy contractor and regulatory agencies.

Further discussions should identify the exact sampling locations and sampling protocols.

SPECIFIC COMMENTS

Is it possible to determine which drain line may have received the dental amalgam prior to 1970 and whether the mercury-containing dental amalgam (Table 2-1) was transferred to the Boat Channel via combined sewer/storm drains? If this can be determined, it may warrant placement of a sediment sampling location at that storm water outfall. A similar assessment should be made for the transformer fluid drained into storm drains and the photo processing waste water sewered without treatment until 1980 (Table 2-1). Should the evaluation of storm drain transport from these sources indicate that discharge could have occurred through multiple storm drains, sediment sampling at storm drain outfalls should be included in the storm drain evaluation to be performed in the fall/winter of 1995 so that this investigation can concentrate on the entire boat channel.

DTSC supports evaluation of potential storm water transport to the Boat Channel during the fall/winter of 1995 (Section 2.2, page 2-10).

The exposure period in toxicity testing using *Neanthes arenaceodentata* should be lengthened to allow measurement of growth as an additional endpoint (Section 3.4.2, page 3-11).

The discussion of toxicity testing (Section 3.4.2, page 3-11) states that toxicity tests will be performed on all 18 surface sediment samples while the section on sampling indicates that nine samples will be collected at random and a tenth sample will be collected near the former firefighter training area (Section 3.3.1, page 3-7). Please amend the text so that these two sections are in agreement.

Cultured organisms should be used in the aquatic toxicity test rather than field collected organisms where possible (Section 3.4.2, page 3-11) to reduce variability. The control sediment for the cultured organisms should be the culture sediment.

Mr. Phyl Dyke
November 20, 1995
Page 4

The negative control criteria are specified as 10 percent or 20 percent depending on the test organism in the text (Section 3.4.2, page 3-11) while a table presents the performance criteria as 10 percent or 30 percent (Table 3-2, page 3-12). Please amend the table to agree with the negative control criteria listed in the text of 10 percent or 20 percent.

Differences in growth rate should be added as an additional endpoint for the polychaete worm tests (Table 3-2, page 3-12). This endpoint is regularly measured in polychaete toxicity tests.

A footnote to the table (Table 3-2, page 3-12) correctly indicates that either a relative difference in response or a statistically significant difference may be interpreted as biologically significant. The text incorrectly states in the facing page that both criteria must be satisfied to indicate biological significance (Section 3.4.2, page 3-13). Please amend the text to agree with the criteria stated in the footnote.

The description of sediment core collection (Section 4.3, page 4-1) should include the fact that teflon liners will be used as stated in the Field Sampling and Analysis Plan (Section 4.3.2, page AA-4).

The core should be photographed with a scale included in the frame after extrusion of the core (Section 4.3, page 4-1).

The standard exposure period for amphipod bioassays is 10 days rather than the 4 day exposure period proposed (Section 5.2, page 5-1). The standard exposure period for polychaete bioassays where growth rate is a measured endpoint is 21 days. It is doubtful that shorter exposure periods will detect any contaminant-related effects except in highly-contaminated sediment.

DTSC agrees that the scope of this investigation does not include assessment of biota associated with the water column or terrestrial biota which exploit aquatic resources (Section 6.2, page 6-2). The results of the sediment study may indicate that these receptors require evaluation.

The decision criteria for sediment chemistry (Section 6.2, page 6-2) need clarification. The initial presentation of decision criteria (Figure 3-2, page 3-5) indicate a comparison of sediment chemistry concentrations with National Oceanic and Atmospheric Administration (NOAA) Effects Range-Low (ERLs) and Effects Range-Median (ERMs) as the single decision criterion. Later (Section 0.2, page 6-2) a statistical difference among sampling strata is required to indicate a potential sediment chemistry problem with subsequent comparison with ERLs and ERMs. Isolated sediment concentrations elevated above ERLs or ERMs may be considered significant even if there is no statistical difference among the sampling strata. For

Mr. Phyl Dyke
November 20, 1995
Page 5

example elevated mercury, polychlorinated biphenyls or silver at a single outfall, due to past disposal practices, could be considered significant and require further investigation regardless of the statistical comparison of the strata.

The footnotes describing the decision matrix (Table 6-1, page 6-3) should clearly state that either a statistically significant difference ($p \leq 0.05$) or a relative difference of 20 percent or 30 percent in the toxicity testing would be indicated by a plus.

The Field Sampling and Analysis Plan (FSAP) indicates that temperature will be measured to the nearest 0.5°C (Section 4.2.2, page AA-4) while the Quality Assurance Project Plan (QAPP) indicates that temperature will be measured to $\pm 0.1^{\circ}\text{C}$ (Table C3-3, page C3-6).

The sediment core sampling plan (FSAP Section 4.3.2, page A4-5) should include a photograph of the core with a scale included in the frame after extrusion from the Vibracore device.

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION**

9771 CLAIREMONT MESA BOULEVARD, SUITE B
SAN DIEGO, CA 92124-1331
PHONE: (619) 467-2952
FAX: (619) 571-6972

CODE 18

1995 NOV 22 PM 12:31



MEMORANDUM

TO: Ms. Alice Gimeno
California Environmental Protection Agency
Department of Toxics Substances Control
Office of Military Facilities, Region 4
245 West Broadway, Suite 425
Long Beach, CA 90802-4444

FROM: Mr. Corey M. Walsh
California Regional Water Quality Control Board
San Diego Region (9)
9771 Clairemont Mesa Boulevard, Suite B
San Diego, CA 92124-1331

DATE: November 14, 1995

SUBJECT: Response to comments on document entitled:
*"Draft Work Plan Sediment Characterization of Boat
Channel", Naval Training Center, San Diego California*

INTRODUCTION

Staff have reviewed the *Draft Work Plan* and Attachment A *Field Sampling Plan*, dated October, 1995. The work plan was prepared by Bechtel National, Inc. for Southwest Division Naval Facilities Engineering Command in accordance with CTO-0092.

GENERAL COMMENTS

Consider subdividing each of the three "strata" into near-shore (below storm water outfalls) and deep water zones, then randomly select sample locations within these zones.

Assure sample collection depths extend through entire estuarine deposits to the native soil contact.

The proposed division of each core into six (approximately one foot long) subsections should take into account physical characteristics of the sediment (e.g. depositional intervals).

Sediment chemistry should be conducted for each toxicity test sample (surface sediment interval).

Ms. Alice Gimeno

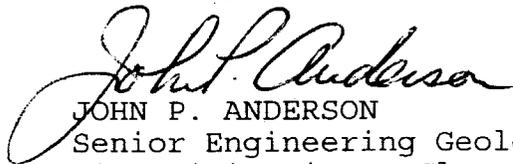
-2-

November 14, 1995

Will the basic water quality samples be collected at the surface or at depth?

If you have any questions concerning this memorandum, please contact Corey Walsh at (619) 467-2980.

Sincerely,



JOHN P. ANDERSON
Senior Engineering Geologist
Site Mitigation & Cleanup Unit

cc: Ms. Claire Trombadore
U.S. EPA (H-9-2)
75 Hawthorne Street
San Francisco, CA 94105-3901

Thomas Macchiarella
Remedial Project Manager, Mail Code 1832.TM
Southwest Division Naval Facilities Engineering Command
1220 Pacific Highway
San Diego, California 92132-5187

Mr. Phillip Dyck
BRAC Environmental Coordinator (BEC)
Naval Training Center
33502 Decatur Road, Suite 120
San Diego, California 92133-1449