

DEPARTMENT OF HEALTH SERVICES  
TOXIC SUBSTANCES CONTROL PROGRAM  
2151 BERKELEY WAY, ANNEX 9  
BERKELEY, CA 94704

N00217.001601  
HUNTERS POINT  
SSIC NO. 5090.3



November 16, 1990

Mr. Richard Powell  
Western Division  
Naval Facilities Engineering Command  
P.O. Box 727  
San Bruno, CA 94066-0720

Dear Mr. Powell

**DHS, RWQCB AND CALIFORNIA FISH AND GAME COMMENTS ON THE DRAFT ENVIRONMENTAL SAMPLING AND ANALYSIS PLAN FOR HUNTERS POINT ANNEX**

Enclosed are the Department of Health Services, San Francisco Regional Water Quality Control Board and the California Department of Fish & Game comments on the Draft Environmental Sampling and Analysis Plan (ESAP) dated August 28, 1990.

Please address all comments on a point-by-point basis and add the responses as an appendix to the next draft of the ESAP.

If you have any questions regarding the attached comments, please contact the appropriate regulatory agency personnel.

Sincerely,

A handwritten signature in black ink, appearing to read "Mark Malinowski", is written over a horizontal line.

Mark Malinowski  
Engineering Geologist  
Region 2  
Toxic Substances Control Program

Enclosure(s)

cc: Chuck Flippo - EPA  
U.S. EPA, Region IX  
Remediation Project Manager  
75 Hawthorne  
San Francisco, CA 94105

Tom Gandesbery  
S.F. Bay, RWQCB  
1800 Harrison Street, Suite 700  
Oakland, CA 94612

D/N 80

Mr. Richard Powell  
Page 2  
November 16, 1990

Mike Rugg  
California Dept. of Fish & Game  
7329 Silverado Trail  
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Yountville, CA 94599

Chip Demarest  
NOAA  
c/o U.S. EPA, Region IX  
Technical Support Section, (H-8-4)  
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San Francisco, CA 94105

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DHS Comments on the Draft Environmental Sampling and Analysis Plan (ESAP) for Hunters Point Annex - 28 August 1990

<u>#</u>	<u>Pg.</u>	<u>Sec.</u>	<u>Pgph</u>	<u>Comment</u>
1	1-5	1.4.2	4	Do you propose using the EMCON chemical and bioassay data in conjunction with the data generated by the ESAP? Were the protocols and analysis used by EMCON the same as proposed in the ESAP? Why is this area not addressed in this ESAP?
2	2-2	2.2.1	2	The Department recommends that sediment sampling stations be established for the dry dock 4 area; in the docking area east of dry dock 4 (adjacent to buildings 270-272); and north of the submarine dry dock areas.
3	2-2	2.2.1	2	The location of S-11 and/or S-12 may need to be relocated pending identification of a firing range identified along the landfill shoreline.
5	2-3	2.2.2	2	Provide a map identifying the specific location of the reference site in the San Pablo Bay.
6	2-6	2.4	3	Add a sentence identifying that samples collected for tributyltin analysis will be frozen within 24 hours (as identified in Section 2.9).
7	2-6	2.5	3	Why are surface water samples being collected instead of water near the bottom of the sediments?
8	2-9	2.7	1	Discuss what will be done if bioassay control mortality is greater than 10%.
9	3-2	3.2	2	The Department recommends that mussel station sampling areas be established for the dry dock 4 area; in the docking area east of dry dock 4 (adjacent to buildings 270-272); and North of the submarine dry dock areas.
10	3-8	3.9.1	2	Specify the difference in analytical procedures for metal analysis and identify why the change was made.
11	Table 3.			For Note "g", define "significant results" as greater than 50% sediment bioassay mortality or reference Section 2.9.

INTERNAL MEMO

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TO: Mark Malinoski, DHS/TSCPL 11-10-1990/2/90  
faxed to Region 1 (8) 498-7888  
FROM: Tom Gandesbery SUBJECT: PI, HPA  
FILE #: 2169.6032  
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Attached are RWQCB comments on the ESAP. In my absence, Mike Carlin of this office can answer questions regarding our comments. Note that I will be out of the office from October 6 through 27, 1990. We would be happy to discuss these comments with you, the other agencies and the Navy once the report has been reviewed and you have collected all the responses.

In addition, regarding the September 12, 1990, Draft Remedial Action Plan/Closure Plan for the 23 Underground tanks at HPA, I have reviewed the plan and have no comment on its content.

COMMENTS ON DRAFT AMENDMENT TO WORKPLAN,  
RI/FS, NAVSTA TREASURE ISLAND, HUNTERS POINT ANNEX  
Environmental Sampling and Analysis Plan (ESAP)

**GENERAL COMMENTS:**

The approach described, as described within the ESAP, for the testing of sediments from Hunters Point Naval Shipyard (HPA) is confusing. It is not clear why the authors selected the testing methods cited. As mentioned below, a new draft of the COA/EPA manual is now available and should be incorporated in the ESAP.

The standard methods utilized, or modified for use in this study should be cited in the ESAP.

Copies of the lab protocol used should be included in the ESAP as should the qualifications and experience of the person(s) conducting the experiments.

A laboratory QA/QC element should be included in the ESAP.

**PAGE # SECTION**

- |     |       |   |
|-----|-------|---|
| 1-1 | 1.1   | Dredging should be reviewed in the context of this report. Maintenance dredging and other "present activities" can not be treated as a separate issue.  |
| 1-1 | 1.2   | It will be difficult to link toxicity test to specific chemicals. Rather the focus should be to reduce toxicity.<br><br>"...due to lack of comparative background information...": Bay-wide studies were conducted by USGS in 1987-88. This should be reviewed and discussed. |
| 1-2 | 1.4.2 | Why are dredge area data not comparable to non-dredge area data?<br><br>Dry Dock #4 should be included in this study.   |

- 2-1            2.1            Chemical analysis should be conducted for all, or a representative sample, of the sediments...not only sediments in which >50% of the organisms die.
- Compare "background" radiation levels found in Homeporting EIS and incorporated into the sample design.
- Use the latest version of the EPA-COE Manual: "Ecological Evaluation of Proposed Discharge of Dredged Materials into Ocean Waters", 1990.
- 2-2            2.2.1            Do not avoid the dry dock area; Sediments are mobile.
- Sampling sites should be based, in part, on topography; therefore, bathometric charts should be reviewed. Older and recent charts should be compared to delineate areas of sediment accretion.
- 2-3            2.2.2            How does grain size at San Paulo Bay site compare to that at HPA?
- 2.3            The Amphipod should be Eohaustoris spp.
- Delete use of mysid shrimp. These animals usually die from clogged gills.
- 2-4            2.3.2            Describe and or provide an illustration of a "benthic shovel".
- 2-4            2.3.3            How will temperature and salinity be monitored? Brine or re-constituted water from Bodega Bay is more desirable than use of artificial sea salts.
- 2-4 & 2-5            What is the basis for the 20% mortality figure? This figure maybe dependent upon the species of concern (i.e, 10% for hardy species, 20% for fragile species).
- 2-5            2.4            "Grab sediment samples will be discarded if they are low in volume...": What is the minimum volume? 2.5' is not a surfical sample".
- Will infauna be screened from sediment samples at the sampling site?

- 2-6 2.4 Teflon sample containers should be used if sorption by the polyethylene is of concern.
- 2-6 2.4 "...filled to overflowing, the sediment will be slowly stirred with a glass rod" : This is unacceptable. A more thorough method of sample mixing should be proposed.
- 2-6 2.5 "Uncontaminated seawater.....will be collected from...San Paulo Bay." : Why is it assumed that San Paulo Bay is "uncontaminated"? It is recommended that seawater be filtered and sterilized using an ultraviolet light unit.
- 2-7 2.6.1 2nd through 4th Bullet: Sieving for infauna should be conducted at the time of collection. Sample handling should be minimized.
- 2-7 2.6.3 Why is it proposed that seawater be replaced? Repeated replacement of the seawater will probably result in essentially diluting contaminant levels in both sediment and seawater. Possible contaminants present in sediment pore-water would be replaced and diluted, as would contaminants which have become dissolved in the seawater itself. Additionally, since dissolved contaminants maybe in equilibrium with those on sediment particles, repeated replacement of seawater could result in a effective leaching away of toxicants.
- 2-8 2.6.7 How will "obvious mortalities" be distinguished from live subjects, especially in the case of the clam?
- 2-9 2.7 Toxicants found in samples should be included in the table as the relative sensitivity of organism to toxicant is of primary interest.
- 3-1 3.1 Is the use of mussel stations duplicative with the State's Mussel Watch Program? There is a station located offshore of HPA.
- 3-1 3.1 Use Mytilus californianus, not M. edulis.
- 3-1 3.1 last paragraph: how will HPA be linked to substances found in mussels in light of other point and non-point sources along the SF waterfront? Why is the study only

"qualitative"?

- 3-5      3.6      Mussels should not be placed in polyethylene bags between the ice chest and deployment.
- 3-5      3.6      The buoy system should be reevaluated. An inflatable subsurface float sounds flimsy. How will these buoys be protected from fouling boat propellers?
- 3-8      3.9.1     Include Percent Lipid Content along with other analysis.
- 4-4      4.4.3     Why dilute reference water? The species chosen have specific salinity requirements.
- 4.5      DHS does NOT certify any labs for chronic toxicity testing.
- 4-5      4.6.3     "...the results of the remaining dilutions will be discarded." : Results of dilutions should be reported in the results along with the data for the 100% samples.
- 4-6      4.9      Reference EPA guidance defining an "acceptable test" and depends upon the test. 80 percent survival maybe acceptable in one test and unacceptable in another, depending upon which protocol is used.

hpacmmnt

# Memorandum

To : Mark Malinowski  
Department of Health Services

Date : November 15, 1990

From : Department of Fish and Game

Subject : U.S. Navy, Treasure Island, Hunters Point Annex, San Francisco - Comments and Recommendations on Environmental Sampling and Analysis Plan (Aug, 1990).

It is my understanding that the objectives of the draft program are to provide sufficient data to address potential environmental effects associated with the release of contaminants from the subject facility. Page 1-1 of the draft plan explains that this study will supplement previous environmental sampling programs, yet is somewhat vague in its discussion of the specific uses for which the data may be sufficient for decision-making opportunities.

One of the major shortcomings of this effort is its focus away from any current activity which may be subject to an existing regulatory program, i.e. dredging, or evaluation of current site operations at dry dock #4. Another shortcoming is its broad brush approach to risk analysis, based not on the health, or relative contaminant burdens of the local biota, but rather on short-term exposure of transplanted or laboratory animals to composite samples of water and sediments collected from many general areas of the facility and periphery. I question if the data will be "sufficient to address specific environmental concerns..." mentioned on the first page. I offer the following specific comments for your consideration.

p. 2-1 The question of sediment toxicity must not be restricted to just near surface deposits. The sediment column deposited since 1869 should be analyzed. While it may be concluded later that remediation of deeper sediments is unnecessary or impractical, the assessment shouldn't be so severely restricted.

Chemical analysis of sediments should be undertaken on all samples, not just those exhibiting greater than 50% mortality in the bioassay. If any "indicator of concern" is applied as a criterion for chemical analysis, "any significant mortality" (greater than that experienced in a valid reference test) would be more appropriate.

p. 2-2 The exclusion from consideration in test station selection of "Areas of little or no influence from present uses at HPA" or "Areas of little or no influence from potential sources of contamination other than HPA" are unwarranted as they eliminate proper evaluation of historical problems within those areas on the basis of reducing cause and effect conflicts. There may be good reasons for excluding certain areas, but these do not seem appropriate.

p. 2-5 Sediment sampling areas, proposed on Plate 3, appear to be appropriately distributed, but seem excessively large. Compositing 10 subsamples

collected within the sample area will likely obscure identification of hot spots and make data interpretation more difficult. I suggest that no more than 3 discrete samples be collected within the proposed sample sites. If greater volume of sediment is needed for chemical and biological tests, more grabs or cores should be taken and perhaps composited. Individual samples as well as composites should be handled and/or composited in a manner which maintains stratigraphic integrity. Sediments should be analyzed in at least 3 distinct regions, i.e., upper 4-6 inches, 5in to 2ft, and 2-10ft. Additional subsamples should be taken and analyzed if obvious sandblast debris or other changes in sediment characteristics are observed. Bulk sediment analyses are essential for evaluation and interpretation of biological data. Solid phase bioassays could be restricted, if this is a Phase I project, to the surficial sediments, as long as chemical analyses are undertaken on deeper sediments as well as those tested for toxicity.

Sediment compositing and preparation methods should be revised to reflect discrete sampling methods. Screening for benthic invertebrates, discussed as a preliminary step in sample preparation, should be undertaken as soon as possible after collection. This provides an opportunity to identify any organisms encountered and perhaps saved for body burden analysis.

p. 3-2 Site selection criteria for mussel transplants should eliminate or minimize criteria #s 4 and 5. Criterion #2 seems to imply that sediment sampling stations and mussel transplant stations were located with different objectives, i.e. "...closer to shore to address potential for groundwater seepage, direct surface water runoff and/or discharge from storm sewer outfalls". It would seem obvious that the different programs will be sampling different environments with different biological receptors, but both methods will be attempting to identify the effects of current and past discharges from HPA. If one of this program's objectives is to evaluate the bioaccumulative potential of storm water, the stations should be located within outfall areas A-1. The likelihood of this program element identifying bioaccumulative constituents from groundwater seepage is extremely remote. Perhaps analyzing contaminant body burdens from nearshore benthic organisms and comparing results with sediment and groundwater samples from the area would be more responsive; or simply conducting a 30 day laboratory exposure of appropriate bivalves to collected samples of groundwater.

The proposed 30 day test period is of questionable duration to identify anything but the most gross effects. The daily, monthly, or purely seasonal changes in runoff and groundwater movement and quality will affect study results. If short-term trends are desirable, subsamples of transplanted organisms could be collected in multiples of 30 days.

p. 4-1 The "Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms" is an appropriate and useful protocol; however, contrary to the draft, it is not yet being used by the RWQCB to determine "...the acceptability of effluent into SF Bay through the NPDES permitting." The protocol is being required of certain large dischargers for process and toxicity reduction evaluations purposes.

p. 4-2 Stormwater discharges are known to carry significant contaminant loads, yet compositing methods and biological test methods will not be able to identify sources of contaminants, or specific toxic components. As there are 9 outfall areas (A-1) identified in Figure 3 for HPA, it would

seem inappropriate to restrict the assessment of stormwater quality to only a few. It would seem important to sample and analyze all systems, especially within those which are identified as having multiple sites with historic discharge problems. Each of the 16 identified "Associated sites" should probably be characterized individually, collectively and then determine their influence upon the biota in bay waters through a modified mussel studies program. Chemical analyses should also be conducted on any stormwater sample in which significant mortality (<90 survival) is exhibited.

The analysis of sediments and mussel tissues for heavy metals, certain pesticides and priority organics should be augmented by analysis for benzene, toluene, xylene and Total Petroleum Hydrocarbons to better characterize the source, fate and effects of more commonly encountered petroleum hydrocarbons in the HPA stormwater and groundwater systems.

### Discussion

The draft program is a good start, but insufficiently comprehensive or focused to address the many and varied concerns for this site. The avoidance of specific areas in which Triple A or other lessees are currently working is puzzling, and may seriously compromise the value of the assessment.

It appears that major shortcuts or concessions in project design are being sought in the interest of cost savings or as a consequence of serious budget constraints. While such concerns are certainly valid, the consequences in reduced data availability, specificity, ultimate significance and final interpretation and usefulness of the results are put at risk. If the subject draft were outlining a preliminary toxicity and bioaccumulation risk assessment upon which additional phases would be based to respond to specific problems identified, then I could better understand its approach. However, as this is to be a definitive work on the HPA's potential to increase the risk of toxicity and bioaccumulation in adjacent waters, forming the basis for identification and justification of the need for site remediation, then I seriously question if the data will be adequate to address these issues.

No attempt is made to characterize the existing benthic populations within adjacent intertidal and subtidal areas. Knowledge of what is living there now and their accumulation of contaminants of concern would be a logical first step in site evaluation.

It is my opinion that this program could provide an acceptable framework or approach for site evaluation, but needs significant augmentation and revision to make it worthwhile.

If you have any questions on my analysis, or need further clarification, please give me a call.



Michael E. Rugg  
Assoc. Water Quality Biologist  
Region 3