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4 OCT 1988

Mr. Dwight Hoenig
Department of Health Services
State of California
Toxic Substances Control Division
North Coast Section
2151 Berkeley Way, Annex 7
Berkeley, CA 94704

Subj: SUMMARY OF RESPONSES TO DEPARTMENT OF HEALTH SERVICES COMMENTS ON
REMEDIAL INVESTIGATION/FEASIBILITY STUDY WORK PLAN (PUBLIC HEALTH AND
ENVIRONMENTAL EVALUATION PLAN) FOR NAVAL STATION, TREASURE ISLAND,
HUNTERS POINT ANNEX

Dear Mr. Hoenig:

Enclosure (1) contains our responses to comments from the Department of Health Services on the Remedial Investigation/Feasibility Study Work Plan (i.e., the Draft Public Health and Environmental Evaluation (PHEE) Plan) for Naval Station, Treasure Island, Hunters Point Annex. The enclosure is provided in lieu of the draft final document as discussed during a phone conversation between Mr. William Owens of your staff and Mr. Gregory Brown of this office on September 7, 1988. Upon satisfactory review of our responses, we will revise the draft PHEE plan and provide it in its final version.

Thank you for the active involvement provided by your agency. Should you have any questions regarding this matter, the point of contact is Commander, Western Division, Naval Facilities Engineering Command (Attn: Mr. Alex E. Dong, Code 1146, (415) 877-7505).

Sincerely,

P. W. DRENNON
CAPTAIN, CEC, USN
COMMANDER

Encl:

(1) Response to Department of Health Services Comments on Draft Public Health and Environmental Evaluation Plan

Copy to:

Regional Water Quality Control Board (Attn: Steve Ritchie)
Bay Area Air Quality Management District (Attn: Scott Lutz)
U.S. Environmental Protection Agency (Attn: Jerry Clifford)
California Dept. of Fish & Game (Attn: Mike Rugg)
U.S. Fish & Wildlife Service (Attn: Don Palawski)
National Oceanic & Atmospheric Administration (Attn: Sharon Christopherson)
City and County of San Francisco (Attn: David Wells)
San Francisco District Attorney (Attn: Steve Castleman)

N/W 49

RESPONSE TO DEPARTMENT OF HEALTH SERVICES (DHS) COMMENTS
ON DRAFT PUBLIC HEALTH AND ENVIRONMENTAL EVALUATION
(PHEE) PLAN

The following presents the Navy's response to DHS comments on the draft PHEE Plan, including the Attachment (preliminary PHEE). Most of the comments were in reference to the preliminary PHEE; because this part of the document is preliminary in nature, the Navy proposes that the suggested DHS changes await the preparation of the final PHEEs. At such time, additional data will have been collected as part of the remedial investigations and selection of indicator chemicals as well as the risk assessment process will be more appropriate than the preliminary PHEE. The Navy does, however, propose to revise the plan portion of the PHEE Plan to reflect the DHS comments as appropriate (see Sections I and II, below).

Comment:

I. GENERAL COMMENTS

- A. There needs to be further development on the potential risk to the environment, particularly on San Francisco Bay and its resident organisms. This will involve an assessment of its current flora and fauna, and may also necessitate additional offshore sampling for contaminants.

Response:

Rather than an assessment of current flora and fauna, the Navy proposes a three-fold approach to address potential concerns regarding chemical releases from HPA and their effect on the environment. The three major areas of concern and the corresponding approaches are:

1. The toxicity and bioavailability of potential contaminants in bay sediments will be evaluated using offshore sediment samples (probably composites). Chemical analyses and bioassays (using benthic organisms) will be performed. Tissue analyses will also be performed on the same organisms used in the bioassays.

2. The toxicity of stormwater runoff to aquatic organisms will be evaluated utilizing bioassays performed with stormwater runoff samples.
3. The toxicity and bioconcentration of chemicals potentially reaching the bay via groundwater releases will be evaluated utilizing a mini mussel watch program similar to that operated by the California Department of Fish and Game.

Once comments regarding the above-outlined approach are received from the regulatory agencies, the Navy proposes to prepare a work plan describing this program. The work plan will include descriptions of the sampling procedures, methods of analysis, quality control procedures, and safety protocols.

The PHEE Plan will be revised to describe how this information will be used in the final PHEEs.

Comment:

- B. This document as presented is incomplete in that it has not been written for the uninitiated reader. A more complete document should be prepared for the overall PHEE assessment (defined on page 1-6 of the Public Health and Environmental Evaluation Plan (PHEEP), one that is geared more toward the layman. This final document should include all justifications that back the scientific inferences.

On the same note, all factual statements and assumptions should be referenced or stated as appropriate to the discussion. Rationalizations and digression into logic need to be clearly spelled out. The ultimate goal of this document is that it should stand on its own, and not need additional support or interpretation by outside experts.

Response:

The Navy feels that the document is complete for the purposes for which it was intended. The main purpose of the document was to describe the process which will be followed in

performing the health and environmental assessments. The Attachment described a preliminary assessment, based on the available data, and was prepared at the request of DHS. No changes to the document are proposed; however, the Navy will consider these comments in preparing the final PHEEs.

Comment:

II. PUBLIC HEALTH AND ENVIRONMENTAL EVALUATION PLAN
(PHEEP)

- A. Page 3-4, Task 1.3: This task only discusses site specific hydrogeologic descriptions. It is the Department's position that such studies of themselves will only provide a partial assessment of a significant contaminant pathway at Hunters Point. The final PHEE should provide a hydrogeologic summary of the entire facility. This will entail additional effort on the part of the Navy to perform a complete hydrogeologic study of the Hunters Point facility.

RESPONSE:

The Navy intends to conduct a comprehensive site investigation to address pertinent hydrological characteristics of the site. Specific work plans have been submitted to the regulatory agencies describing the field programs for the remedial investigations. As part of these field programs, numerous wells will be installed and data on water levels and general chemical characteristics will be collected. Additional wells will be installed, as needed, to perform an HPA-wide hydrogeological assessment. This will be clarified in the revised document.

Comment:

- B. Page 3-6, 2nd paragraph: The " octanol-water partition coefficient" should be changed to "organic carbon partition coefficient" .

Response:

The correction will be made to the revised text.

Comment:

- C. Page 3-6, 4th paragraph: The standard approach to dose-exposure calculations typically assumes a 70-kg man as the receptor. Unfortunately, this is more appropriate for industrial exposure. When looking at public health, women and children need to be considered as well. Therefore, a 10-kg child (the more sensitive receptor) should be used for these calculations. This will also require changing the soil ingestion value of 100 mg for the 70-kg man to the more appropriate 590 mg for the 10-kg child. If the argument is that only 70-kg males will be exposed, the rationale for this argument should be presented early in the document.

Response:

Women and children will be considered as necessary in the future assessments. The document will be modified to reflect this.

Comment:

- D. Page 3-7, Item 3: The "regulatory criteria" referred to here should be specified. Please remember that the regulatory criteria spelled out in Article 11, Title 22 of the California Code of Regulations are not applicable from a health-assessment standpoint, and should not be used as such.

Response:

Regulatory criteria cannot be specified at this time because criteria are dynamic and change with time. Such regulatory criteria (ARARs) have previously been provided by the DHS to the Navy. The Navy does not intend to use Article 11, Title 22 of the CCR. No changes to the document are proposed.

Comment:

- E. Page 3-8: In addition to the listed criteria for choosing indicator chemicals, the following should also be considered: 1) ease of analytical determinations; 2) representativeness of a family of compounds found on the site.

Response:

Ease of analytical determinations and representativeness of chemical families will be considered in selecting indicator chemicals. The document will be modified to reflect this.

Comment:

- F. Page 3-9: The abbreviation for the reference dose, RD, should be changed to RfD, in keeping with EPA's nomenclature.

Response:

The typographical error will be corrected in the revised document.

Comment:

- G. Page 3-17, Task 4.1: This paragraph should be deleted. Since no practical solution is given for absorption rates, it is necessary and appropriately conservative to assume 100% dose absorption for the receptor.

Response:

The 100% dose absorption will be used if no pharmacokinetic data are available. However, where appropriate data are available for absorption rates, they will be used and references cited. Use of absorption rates in dose response assessments is referenced in the California Site Mitigation Decision Tree Document (DHS, 1986) and is acceptable under the guidelines for development of dose-response assessments in the Superfund Public Health Evaluation Manual (SPHEM) (EPA, 1986). This will be clarified and references cited in the revised document.

Comment:

- H. Page 3-17, Task 4.1: Recent changes at EPA employ the RfDs rather than the ADI. The Navy should consider incorporating such changes into this document.

Response:

The EPA established the use of RfDs early in 1986. Much of the oral route acceptable intake values referenced in the SPHEM (EPA, 1986) are based on RfDs. However, acceptable values for air intake are not based on RfDs and some oral intake values are based on the Health Effects Assessment Documents which utilize the development of ADIs (AIC, AIS). Therefore, because not all acceptable intake values will be based on RfDs, we propose using the acceptable intake for chronic exposure (AIC) in its place. The document will be revised to reflect this.

Comment:

- I. Page 3-18, Task 4.2: This task discusses the use of available carcinogen potency (q^*) calculations to determine unit cancer risks. Will unit cancer risks be calculated for which no q^* values are available? If so, how will this calculation be done?

Response:

No q^* calculations will be made by the Navy. It is anticipated that q^* values will be used that have been developed by the EPA Cancer Assessment Group or by the Department of Health Services.

Comment:

- J. Page 3-19, Tasks 5.1 through 5.3: In addition to site-specific exposures, a complete exposure level should also be calculated. Where data are available, synergistic and antagonistic effects should be considered. Otherwise, the additive model can be used.

Response:

Just as in absorption rate considerations, very little data exist on chemical interactions. According to the SPHEM, where chemical interaction data are unavailable, additive affects should be considered. However, other chemical interaction data will be used, as available.

III. PRELIMINARY PUBLIC HEALTH AND ENVIRONMENTAL
EVALUATION (preliminary PHEE)

Comment:

- A. Page ES-2: Radioactivity should be included in the list of indicator chemicals on this page.

Response:

At the time the preliminary PHEE was prepared, there were no analytical data to suggest that radioactivity existed on the site. However, if the RI field investigation indicates the presence of radioactivity significantly above background, the source of the emission will be identified chemically and listed as an indicator chemical, if appropriate. The generalized listing of "radioactivity" will not be used as an indicator chemical since it provides no information on the chemical nature of the emission or the type of emission (in terms of alpha, beta or gamma emission) which is pertinent to the understanding of the amount of risk to a receptor should exposure occur.

Comment:

- B. Page ES-3: The rationale for a 5-year exposure to worst-case conditions should be substantiated by more than a personal communication (Section 4, page 4-10). If substantiation cannot be properly established, some margin of safety should be included in the calculations.

Response:

The five-year exposure scenarios were based on historical Navy records for typical lengths of employment at Hunters Point. Because the final PHEEs will likely use a different scenario should proposed construction at Hunters Point occur, the rationale for exposure to worst-case conditions will be reevaluated. The preliminary PHEE was based on past and present exposure scenarios, and not on future conditions at the facility. Therefore, the Navy feels that no changes in

the rationale for the preliminary PHEE are needed at this time.

Comment:

- C. Page ES-4: The assumption that winds are primarily eastward is oversimplified, since local eddy currents and directional changes occur daily. These changes should be factored into the exposure estimates.

Response:

Prevailing wind conditions at Hunters Point are complex considering seasonal variations and temperature fluctuations between day and night time conditions. The Navy has proposed to implement an air sampling program with appropriate models to address the complexities of this problem for use in the final PHEEs.

Comment:

- D. Page 1-4, 1st Paragraph: A rationale for extrapolating data for worst-case scenarios should be provided.

Response:

The Navy believes such rationale was provided in the first paragraph of page 1-4 and again before the use of any worst-case scenarios. Data were extrapolated for these scenarios because the available data were limited. It is the Navy's intention to provide appropriate rationale for extrapolating data for worst-case scenarios in the final PHEEs.

Comment:

- E. Page 4-3: The assumption that since VOCs were not found in the surface soils there is no atmospheric release is unjustified. A surface-flux determination should be made (preferably using a surface-flux isolation chamber) to substantiate such a conclusion. A second option would be to remove this assumption by deleting the 2nd sentence of the 3rd paragraph.

Response:

The DHS comments will be noted for the final PHEEs. However, as previously stated, the Navy proposes not to revise the preliminary PHEE.

Comment:

- F. Page 4-12: Several possible routes of exposure were not discussed, particularly uptake of chemicals by shellfish and other marine organisms used as food. Based on the fragmentary data currently available, potential routes of exposure that are judged insignificant in the preliminary PHEE should be re-examined after site characterization.

Response:

To date the data are not available to assess the potential for releases from Hunters Point into the environment. As previously mentioned, the Navy is proposing to provide data to address the subject. Consumption of potentially contaminated shellfish will be addressed in the final PHEEs (refer to response to Comment I.A).

Comment:

- G. Page 4-23: The statement is made that accidental solid ingestion after dermal exposure is thought to contribute minimally to possible human intake of chemicals. Although this may be true in some cases, if family housing is constructed on base potential exposures to children could be significant by this route. Tenant workers who contact soil and do not wash their hands before eating or smoking may also be exposed by this route. Asbestos is present on site and workers clothes could become contaminated. Carcinogenic PAHs may be absorbed through the epidermis. Some of the many organic chemicals present at the landfill may be potent skin irritants or sensitizers (e.g. nickel and chromium). Thus, soil contact must be considered as an exposure route. Chemicals migrating into the Bay may be ingested by marine organisms and incorporated into the food chain. For purposes of completeness this

potential exposure route should be discussed. Heavy metals and PCBs in shellfish are examples of contamination of a food source.

Response:

Skin contact from soil and ingestion of contaminated edible marine organisms are possible exposure routes which will be considered in the development of the PHEEs. The Navy is currently developing a program to evaluate potential releases of chemicals into indicator organisms (refer to response to Comment I.A).

Comment:

- H. Page 4-28: Please provide reference rationale for the statement that, if copper were leaching into the Bay from the site, its bioavailability would be in doubt due to chemical interactions in Bay waters. Precipitation of copper would lead to its presence in sediment where it could be taken up by bottom dwellers.

Response:

Because of the geochemistry of metals in an estuarine system and their interaction with sediment, metals sorbed to sediment are generally not bioavailable to estuarine organisms. Aller, R.C., 1978. The Effects of Animal-Sediment Interactions on Geochemical Processes Near The Sediment-Water Interface. pp #157-172. IN: Estuarine Interactions Ed.M.L. Wiley. Academic Press, New York.

As previously mentioned, the Navy is proposing a program to address the potential effects from contamination of the sediment (refer to Comment I.A).

Comment:

- I. Page 4-32: The use of TLVs implies that only workers will be exposed to contaminants at Hunters Point. However, since there will be a resident population subject to potential exposure, the focus should be on these populations, with the secondary benefit that workers will also be protected.

Response:

Please see page 4-33, Section 4.5.1 in which TLVs are compared to AICs (acceptable intake concentrations) for noncarcinogens and unit risk factors for carcinogens.

Comment:

- J. Page 4-34, 3rd Paragraph: No justifications is given for assuming that all chromium on the site would be in the trivalent state. Some may be present in the carcinogenic hexavalent state. This should be addressed.

Response:

No data were available regarding the presence or absence of hexavalent chromium at the IR sites. Such data will be collected in the RI.

Comment:

- K. Page 4-36: When transfer of chemicals from the site to the Bay is estimated, soil blowing off-site to the Bay, surface water run-off, and groundwater seepage should all be considered.

Response:

Environmental releases from the site will be considered during the development of the environmental risk assessment. The release pathways described above will be evaluated during the investigative phase of the Remedial Investigation.

Comment:

- L. Page 5-1: The section on data deficiencies (Section 5.0) falls short of the mark by only giving broad recommendations to correct these gaps, specifically in the areas of soil, groundwater plume and receptor characterizations. Since this is meant to be a comprehensive document that can be understood by the public, general statements like "Data on chemicals...needs to be collected..." and "...describe those chemical sources adequately..." are not acceptable.. Specific data gaps that may affect chemical

migration and exacerbate exposure risks must be addressed (e.g., soil composition and structure, groundwater, pH, land use, etc.). Attached for edification are excerpts from the EPA's Guidance for Conducting Remedial Investigations and Feasibility Studies Under CERCLA (Attachment A). Although not all of the data needs outlined in this attachment will be necessary or applicable to Hunters Point, it should serve as an example of the level of detail we need to see when addressing data gaps.

Response:

The section referred to is part of the preliminary Public Health and Environmental Evaluation which is in no way meant to be a comprehensive document. Data gaps were listed on Tables 5-1 and 5-2 in Appendix C of the Attachment. In general, because the previously collected data were preliminary in nature (for screening purposes) and because of alleged disposal activities by Triple A Machine Shop, a wide range of data need to be collected. Details on how the data gaps are being addressed are presented in the specific RI Sampling Plans.

Comment:

- M. Page 5-8: Marine organisms potentially susceptible to pollutants migrating off-site should be considered as potential receptors. Sampling of sediments in the Bay just offshore should be considered, especially for metals and PCBs. Sampling of shellfish offshore adjacent to the landfill, bayfill, and sub-base areas would be useful if these areas are a habitat for them.

Response:

As previously stated, it is the Navy's intention to provide information on the potential bioconcentration into shellfish. In addition, bioavailability of chemicals from sediment will be addressed in future studies. Determination of sediment toxicity and bioconcentration will be made. (Refer to response to Comment I. A).

Comment:

- N. Page 6-1: The suggestions outlined in this section only partially address risk minimization. Additional measures will clearly be needed. In the meantime, these suggested steps should be viewed as interim measures to be undertaken prior to the final remedial action. Additional steps should include mitigation of the asbestos hazard at the power plant (both inside the building and on outside structures), and mitigation of the potential metal exposure to workers at the Battery and Electroplating Shop.

Response:

These interim remedial measures (IRMs) have been discussed with the various regulatory agencies during the HPA monthly meetings.

Additional proposals and engineering evaluation/cost analysis (EE/CA) will be forthcoming.

Comment:

- O. Appendix D: The model for fugitive dust emissions is sensitive to wind speed and particle size distribution. These parameters should be actually measured on-site in order to obtain a reasonable estimate of the dust emission rate. In the full PHEE all model parameters and sample runs should be furnished.

Response:

These parameters will be considered during the Air Sampling investigative phase which is described in the Air Sampling Plan (HPA, 1988b).

Comment:

- P. Industrial Landfill (IR-1)
1. Page 2-6, 3rd Paragraph: The three boring depths for soil sampling should be indicated here.

Response:

Soil samples were collected at three depths in each of the nine borings at the Industrial Landfill. The depths of the samples varied with the shallowest collected at 1 foot deep and the deepest at 11 feet deep. The specific depths for the samples are presented in the Appendix to the Scoping Document (HLA, 1988) as well as the original reports (EMCON, 1987).

Comment:

2. Page 3-5: With regard to metals, copper and chromium should be listed as indicator chemicals for soils, due to the high concentrations and toxicity to marine life of the former, and the potential carcinogenicity of the latter in its hexavalent state. Antimony and thallium should be considered for listing for both soil and groundwater, provided they are significantly in excess of background. Later, during remediation, the list of metals may be narrowed for areas where the listed metals are found together, so that mitigating the indicator chemical will also mitigate other contaminants.

Carcinogens such as chrysene should be listed as indicator chemicals, especially when present at relatively high concentrations. Chemicals present in high amounts which exhibit reproductive toxicity, such as xylenes, toluenes and benzene derivatives should also be considered for inclusion.

High concentrations of carcinogenic solvents were found in groundwater, including benzene, trichloroethylene (TCE), and vinyl chloride. We feel the highest ranking of these should be listed as an indicator chemical. The rationale for the choice of chemicals should be included. A more complete characterization of the environmental or health risks posed by these chemicals could be done after completion of the RI.

Response:

Selection of indicator chemicals was based on criteria described in the preliminary PHEE. Protocol for selection of indicator chemicals

was consistent with that described in the SPHEM. The DHS comments will be considered in performing the final PHEEs.

Comment:

3. Page 3-9, 2nd Paragraph: "PH" should be corrected to read "pH".

Response:

The error will be noted. However, as previously discussed, the Navy proposes not to revise the Attachment.

Comment:

4. Page 3-16, Section 3.1.4.4: As currently written, this section is inaccurate and misleading. Specifically, adults are not of primary concern for lead ingestion, and children absorb between 50-60% of an ingested dose of lead. This section needs revision to reflect these facts.

The ATSDR has reduced the level of lead in blood considered to be associated with toxicity in children to 15 ug/dl.

Response:

The Navy believes that the assessment as written is accurate. The site is not currently accessible to children and the preliminary PHEE was prepared to reflect current activities at the site in an effort to determine if a risk to human health currently exists which would require immediate remediation.

Comment:

5. Page 4-4, Last Paragraph: The reference to "episodic and unlikely" leaching of arsenic, lead and nickel is unsupported and should be deleted.

Response:

The DHS comment will be noted; however, the Navy proposes not to revise the preliminary PHEE.

Comment:

Regarding potential releases from the industrial landfill, we do not agree that the vegetation was heavy enough to preclude surface run-off to the Bay or fugitive dust emissions. We also doubt that air sampling was thorough enough to rule out emissions of the large array of organic chemicals present into the air. Emissions could occur from: (1) soil to air, (2) groundwater to soil to air, or (3) groundwater to Bay water to air.

Response:

The pathways described above will be investigated in future investigations (e.g. implementation of the Air Sampling Plan, HLA, 1988).

Comment:

6. Page 4-5: Given the admitted possibility of vehicular traffic, we do not agree that tracking releases of chemicals are unlikely. The presence of high concentration of PCBs, lead, and other chemicals could result in a significant releases.

Response:

The DHS comment will be noted; however, the Navy proposes not to revise the Attachment.

Comment:

Q. Bay Fill Area (IR-2)

1. Page 3-20, 2nd Paragraph: More detail needs to be provided for the screen sizes used, sieving procedure, etc.).

Response:

The description of this process was presented in the document cited; the Navy has previously transmitted copies of this document (HLA, 1987) to the DHS. In summary, sophisticated sieving protocols were not used in that study because the soil samples contained visible pieces of scrap metal and wire; these visible pieces were removed prior to submittal to the

laboratory. No attempt was made to remove all metal fragments.

Comment:

2. Page 3-21: Carcinogens present at high levels such as TCE, DEHP, chrysene, and other carcinogenic PAHs should be reconsidered for listing as indicator chemicals. Unless it is known that chromium is not present in the hexavalent state, it should also be considered for inclusion as an indicator chemical. Because of the toxicity of tin to marine organisms its inclusion as an indicator chemical should also be investigated.

Response:

Please see the response to Comment P-2 above. It should be noted that only organic tin presents a toxic effect to marine organisms.

Comment:

Asbestos should be considered as an indicator chemical at the Bay Fill site; Some explanation or discussion should be given to the presence of "molecular sulfur" at five ppm in groundwater.

Response:

Please see the response to Comment P-2 above concerning the selection of indicator chemicals. The presence of molecular sulfur will be verified in the remedial investigation and, if present, discussed in the final PHEEs.

Comment:

Nonpriority pollutants should not be arbitrarily eliminated just because little is known about their toxicity. For example, 1,3-oxathiolane is present at 25 parts per million (ppm) in groundwater at the Bay fill site yet its toxicity or reasons for its exclusion are not discussed. For little known chemicals present at high concentration, literature searches for toxicity data can be conducted. If necessary, structure activity correlations can be estimated.

4

Response:

For the purposes of the preliminary PHEE, extensive literature searches did not appear warranted. Appropriate discussion will be made in the final PHEEs if warranted.

Comment:

R. Oil Reclamation Ponds (IR-3)

1. We did not find PCBs listed per se in Table 3-20, although it was chosen as an indicator compound (hexachloro-1, 1-biphenyl was listed as a non-priority for soil.) A more detailed rationale should be given for choosing this indicator chemical.

Response:

Hexachloro-1,1-biphenyls which was listed in Table 3-20 is a PCB. PCBs, in general, were chosen as the indicator chemical because of the calculated scoring of chemicals during the development of the preliminary PHEE. The text on page 3-29, paragraph 2 states that hexachlorobiphenyl was assumed to be equivalent to the maximum PCB concentration at the site. In addition, communities are often aware of PCBs (rather than a specific chemical name), and therefore, it was included on the list.

Comment:

2. Consideration should be given to include the following as indicator chemicals (the media of concern is given in parentheses): benzene (soil, groundwater); carcinogenic PAHs, including chrysene (soil); chromium (soil, groundwater); 1,4-dichlorobenzene (groundwater); lead (groundwater).

Response:

Please see comment to Section P-2 above.

Comment:

3. Page 3-35: Here the document indicated that 1,4-dichlorobenzene is not carcinogen. Recent studies (1986) found this compound to be

carcinogenic in both rats and mice in an NTP bioassay. The document should be revised accordingly.

Response:

At the time the preliminary PHEE was prepared, the CAG had not ranked 1,4-dichlorobenzene as a carcinogen. The DHS comment will be noted for the final PHEEs.

Comment:

4. Page 4-6: It is indicated that benzo (a) pyrene is not expected to be released to groundwater, yet 8 ug/1 of this compound has been detected in groundwater (Table 3-23), along with considerable amounts of PAHs. This discrepancy should be corrected.

Response:

Section 4.1.3 discussed only possible expected releases based on physiochemical properties of the chemical. This site will be thoroughly investigated during the RI phase and the additional data will be utilized in the final PHEEs.

Comment:

S. Old Transformer Storage Yard (IR-5)

1. Page 2-14, Section 2.6.4: Which PCBs were found and what were the levels detected? Such information is needed for any risk analysis.

Response:

As previously stated the specific data upon which the preliminary PHEE was based were in reports previously transmitted to the DHS; it was not the intent of the Navy to duplicate all previous data. The PCB was reported to be Aroclor 1260. This PCB was detected in four samples: Boring TD, 1 foot, 15,000 ppb; Boring TE, 1 foot, 1,800 ppb; Boring TP, 1 foot, 130 ppb; and Boring TQ, 1.5 feet, 280 ppb. The soils around and below these borings are to be investigated further during the RI.

Comment:

2. Page 4-7: Given the large number of tenants on the base, we do not feel tenant presence can be discounted at this site for potential PCB releases.

Response:

It was not the intent of this section to discount potential human exposure. The site will be further addressed in the final PHEEs.

Comment:

T. Pickling and Plate Yard (IR-9)

1. Page 3-50: The section for arsenic has been mislabeled. This section should be numbered "3.9.4.1".

Response:

The error will be noted.

REFERENCES

EMCON, 1988. Confirmation Study, Verification Step, Hunters Point Naval Shipyard (Disestablished), San Francisco, California, March 19, 1987.

Harding Lawson Associates (HLA), 1987. Subsurface Investigation, Proposed Galley, Hunters Point Naval Shipyard, July 30, 1987.

Harding Lawson Associates (HLA), 1988a. Scoping Document, Hunters Point Annex, San Francisco, California, March 3, 1988.

Harding Lawson Associates (HLA), 1988b. Air Sampling Plan, Hunters Point Annex, San Francisco, California, July 22, 1988.