



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IX

75 Hawthorne Street
San Francisco, CA 94105-3901

N00217.003009
HUNTERS POINT
SSIC NO. 5090.3

Richard Powell
Western Division
Naval Facility Engineering Command
900 Commodore Drive (09ER1)
San Bruno, CA 94066-2402

Subject: Hunters Point Facility-Wide Draft Hydrogeologic
Technical Memorandum

Dear Mr. Powell:

Thank you for the submittal of the Hunters Point Facility-Wide Draft Hydrogeologic Technical Memorandum. U.S. Environmental Protection Agency (U.S. EPA) has performed a cursory review of the document and provide the enclosed comments for your consideration and incorporation. We look forward to future updates of the document as new information is evaluated and incorporated.

If you should have any questions regarding these comments, please contact me at (415) 744-2409 or you may contact Matthew Hagemann, Hydrogeologist at (415) 744-2326.

Sincerely,

A handwritten signature in cursive script, appearing to read "Alydda Mangelsdorf".

Alydda Mangelsdorf
Remedial Project Manager

Enclosure

cc: C. Shabahari, DTSC
R. Hiett, RWQCB
R. Ramos, WESTDIV
A. Brownell, SFPHD

6/29/94

MEMORANDUM

SUBJECT: Review of the 5/27/94 Hunters Point Facility-Wide Draft Hydrogeologic Technical Memorandum

FROM: Matthew Hagemann, Hydrogeologist
Technical Support Section (H-9-3)

TO: Alydda Mangelsdorf, RPM
Hunters Point (H-9-2)

General comments:

(1) A discussion of the groundwater-surface water relationship is not included in the report. This relationship, including specific points of groundwater discharge, must be understood if ecologic risks to the Bay are to be accurately assessed.

(2) A general conceptual outline of the vertical and horizontal extent of specific soil and groundwater contaminants (e.g. VOCs, BTEX, metals) should be presented in the report. This outline should include estimates of the phase distributions of the various contaminants.

(3) All known physical barriers (e.g. seawalls) to groundwater flow should be identified on one plate and the influence of these barriers should be discussed in the description of the hydrogeology of each parcel.

(4) The potential for the presence of a subsurface DNAPL should be specifically addressed on a parcel-by-parcel basis. The potential should address not only observed soil and groundwater contaminant concentrations, but should also include the history of use of DNAPL products: a recommended reference is the EPA publication, *Estimating the Potential for Occurrence of DNAPL at Superfund Sites*, OSWER Publication 9355.4-07FS, January, 1992.

Text-specific comments:

Section 3.2: As discussed in the 6/15/94 Parcel B conceptual model meeting, the origin of much of the fill used for construction of the lowlands is not known. Knowledge of the origin and method of emplacement of the fill, particularly the fine-grained fraction, would be helpful in conceptualizing groundwater flow and contaminant transport.

Section 3.5.2.1: There is no discussion of the importance that landsliding plays in the hydrogeologic characteristics of Parcel A (and on adjacent parcels). A discussion of the extent of

landsliding, as seen in historical air photographs and on topographic maps, and its influence on groundwater flow should be included in this section.

Section 3.5.2.2: The Bay Mud Deposits only underlie portions of Parcel B.

Section 4.1: The appropriate reference for groundwater basin designation in San Francisco is Phillips, et al., 1993.

Section 4.1.1.2: (1) The report states that, on a regional scale, alluvium may reach thicknesses of 60 feet: Phillips, et al. (1993) state that, on a regional scale, alluvium may reach thicknesses of 200 feet on the east side of San Francisco; (2) the hydraulic conductivities reported by Schlocker (1974) are an order of magnitude higher than those reported by Phillips, et al. (1993); (3) the textural variability of the fill should be discussed in this section.

Section 4.1.2: (1) Other appropriate references on the location and extent of the Hunters Point Shear Zone are: Bonilla (1971) and Wahrhaftig (1984); (2) the presence of the Hunters Point Shear Zone at Parcel A should be mentioned and shown in a figure as mapped by Bonilla (1971).

Section 4.1.3: I do not necessarily agree with the statement that information is insufficient to perform a hydrologic budget at Hunters Point: sufficient information perhaps exists to perform a hydrologic budget for Parcel A.

Section 4.1.6: The lack of future development of groundwater resources of Hunters Point should not be presumed: a commercial spring completed in bedrock just 0.5 from Hunters Point is apparently commercially viable.

Section 4.2: The cross section should include presence of storm drains, sewers, fuel lines, and steam lines.

Section 4.2.1.2: (1) The spring in the parking lot west of Bldg. 101 is not mentioned: this spring has shown the highest discharge of any of the springs that have been observed; (2) the rate of discharge in the spring has been observed well in excess of 200 gal/day; therefore, it is incorrect to state that the aquifer underlying Parcel A does not meet the flow requirement for California Drinking Water aquifer criteria.

Section 4.2.2.1: No mention is made of the seawall constructed to 20 feet depth between Berths 55 and 61 and its influence on groundwater flow.

Section 4.2.4: It is impossible to estimate seasonal groundwater fluctuations without filtering out the effects of tidal influence.

Section 6.1: The review of technical quality and representiveness of the data should include a discussion of the effect filter pack length may have on determining representative groundwater quality in heterogenous media. (Table E-1 shows many filter packs with lengths of 15-27 feet in length.)

Section 6.3: (1) An additional gap in the current understanding of Parcel A is the likelihood of a DNAPL and the extent of the DNAPL, if it exists; (2) the extent of all subsurface barriers, e.g. seawalls, should be investigated.

Section 7.3: Because of the vast quantities of purge water generated from the present and proposed future groundwater sampling efforts, I recommend consideration of low-flow sampling techniques.

Section 7.6: A GIS is needed to manage and overlay the voluminous amount of data at Hunters Point.

Appendix G: This is missing.

Figure 5.1: Sea walls should be incorporated into this schematic diagram.