



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
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HUNTERS POINT
SSIC NO. 5090.3

April 1, 1999

Ms. Jil Finnegan
Department of the Navy
Engineering Field Activity, West
Naval Facilities Engineering Command
900 Commodore Drive
San Bruno, CA 94066-5006

Mr. Michael McClelland
Department of the Navy
Engineering Field Activity, West
Naval Facilities Engineering Command
900 Commodore Drive
San Bruno, CA 94066-5006

RE: EPA Review and Comment, various secondary documents, Parcel B, Hunters Point Shipyard

Dear Ms. Finnegan and Mr. McClelland:

EPA has completed its review of the following Parcel B secondary documents: 1) Draft Final Revised Storm Drain Infiltration Study Approach (2/26/99), 2) Proposed Nickel Screening and Implementation Plan (12-7-98), and 3) Draft Final Report of Groundwater Nickel Plume Delineation A-Aquifer, Revision B (February 1999). Comments on these deliverables are presented below.

1) Draft Final Revised Storm Drain Infiltration Study Approach, dated February 26, 1999

The navy has largely responded to EPA's comments. Page 4: EPA continues to have some concerns about using low permeability to rule out the potential for contaminated groundwater 10 feet away from the storm drains to reach the storm drain thereby eliminating any concerns about the groundwater getting to the drains and either flowing along the bedding or infiltrating the storm drain. This is fill material and permeability measurements will vary from location to location. Page 5: EPA does not agree with the "50 percent difference" being the factor by which additional sources of water should be investigated.

The Navy should consider all possible sources from the onset and keep these sources in mind during the data evaluation stage of the work. Finally, EPA would again like to emphasize that the Parcel ROD states that the navy shall eliminate the storm drain preferential pathway by which contaminated groundwater could flow to the Bay. Therefore, even if the infiltration study indicates that there is no groundwater infiltration occurring at this time, the Navy is still obligated to ensure that it does not become a preferential pathway by which contaminated groundwater could reach the Bay in the future for the duration of the remedy which is arguably 30 years. Therefore the Navy should consider whether or not remediation (lining/grouting where storm drains are present in contaminated groundwater) is preferable to continued monitoring/testing of storm drains.

2) Proposed Nickel Screening and Implementation Plan, dated December 7, 1998

EPA would like to see additional detail in this document. Please explain the history in greater

detail - how we got to this point. Clearly state whether or not this plan applies to all of Hunters Point or just Parcel B. Were only IR sites 4-10 included in the calculation of the regression lines? Please include Dr. Frampton's underlying memoranda in the revised plan and clearly refer to the plots and equations he developed. Please clarify whether or not you used Dr. Frampton's regression line plots or did the Navy do its own? Further, please include any additional, more recent references regarding serpentinite composition and typical levels of Nickel in sandblast grit, if available. Dr. Frampton informed me that Introduction to Geochemistry (1995) by Konrad Krauskopf and Dennis Bird might be an additional reference for serpentinite composition. Also please explain how one would apply this in the field as well as how the chromium-nickel regression is effected by weathering, if at all.

3) Draft Final Report of Groundwater Nickel Plume Delineation A-Aquifer, Revision B dated February 1999

Our most significant comment is that we do not have sufficient information to draw any firm conclusions about Nickel in the groundwater. The bottom line for EPA, as per the ROD, is what is going on at the point of compliance (the TIZ) not the buffer zone so the Navy need not include buffer zone discussions unless it believes it to be important. It does appear that hydropunch samples indicate concentrations have decreased but there are some uncertainties remaining. Also the upgradient sample that is elevated is not in the vicinity of any source removal. EPA would like to see permanent wells installed and would like to participate in the selection of these monitoring well locations. In addition, we would like to see some samples collected unfiltered. Finally, this is the first time we have seen this document and therefore do not think it is appropriate to call it a Draft Final. More detailed comments are presented below.

1. Nickel is strongly adsorbed to iron and manganese oxides and to organic matter, therefore the results of any analysis for dissolved nickel most likely under represent the amount of total nickel present in the environment. Molecules with adsorbed nickel may be transported in groundwater. Future studies should also include analyses for total nickel, and the presence of iron oxides, manganese oxides, and total organic carbon so that the fate of nickel in this area is better understood.

2. The use of a peristaltic pump, rather than a bailer, for metal sample collection typically results in more consistent analytical results. It is unclear whether the Remedial Investigation samples were collected with a bailer or a peristaltic pump. Please specifically discuss sample collection methods used during the RI so that the significance of these recent sampling results can be assessed.

3. **Section 2.3, p. 2-1.** Please specify the tidal stage (e.g., incoming, outgoing) during which each sample was collected. Also, please specify the volume of water purged from each temporary well. Discuss whether temperature, pH, and conductivity had stabilized within 10% before samples were collected.

4. **Section 3, p. 3-1, Table 1.** Please specify the pH for each water sample. Indicate whether the pH is typical of a tidally influenced zone.

5. **Section 3.1, p. 3-2, last paragraph.** The second sentence is insignificant. While it is true that the nickel detections within the FYBZ are less than 965 µg/L, the point of compliance (POC) is the line delimiting the limit of tidal influence. Temporary well MW-02 is only 20 feet from the POC; the concentration of nickel detected in this well (190 µg/L) exceeds the TIZ groundwater quality goal (96.5 µg/L) for nickel by almost 100 µg/L. This should be discussed. Similarly, well MW-11

is only 35 feet from the TIZ and the detected concentration of nickel in this well also exceeds the TIZ goal.

6. **Section 4.0, p. 4-1, paragraph 2.** The solubility-limiting process hypothesis should be tested when permanent wells are installed.

7. **Section 4.0, p. 4-3.** Other possible sources for the significant differences include: 1) the IT samples were collected after soil remediation was completed. The source of nickel contamination may have been removed. 2) The temporary wells were not installed in the same location as the RI wells and many were installed cross-gradient rather than up or downgradient. 3) Three temporary wells (MW-03, MW-03, and MW-06) were installed 20 to 30 feet cross-gradient from the RI wells. Analytical results from non-colocated wells are not likely to be the same. It is likely that the differences are due to several factors; these factors may vary by location.

8. **Section 5.0, p. 5-1.** Please discuss the fact that the groundwater quality goal for the TIZ was exceeded in well MW-02, which is located only 20 feet upgradient of the TIZ. A permanent monitoring well should be installed at the TIZ boundary downgradient of MW-02.

Please give me a call if you have any questions. I will be out the week of April 5 and back in the office April 12.

Sincerely,

Claire Trombadore
Remedial Project Manager

cc: Jil Finnegan, EFAWEST
Chein Kao, DTSC
David Leland, RWQCB
Jim Sickles, TTEMI