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# California Regional Water Quality Control Board

## San Francisco Bay Region

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HUNTERS POINT  
SSIC NO. 5090.3.A

Date: March 30, 2000  
File No. 2169.6032 (CRM)

Commanding Officer  
Department of the Navy, Southwest Division  
Naval Facilities Engineering Command  
1220 Pacific Highway  
San Diego, CA 92132-5190  
Attention: Mr. Richard Mach

**Subject: Response to Draft Technical Memorandum, Parcel B Storm Drain Infiltration Study, Hunters Point Shipyard, San Francisco, California**

Regional Board staff (Board staff) has reviewed the Draft Technical Memorandum Parcel B Storm Drain Infiltration Study, Hunters Point Shipyard, San Francisco, California (Infiltration Study). The Infiltration Study was received in the Regional Board's office on March 22, 2000. Based on our review, we understand that the Infiltration Study is proposing the following additional investigation and remedial activities:

- Removal of sediment along storm drain reach MH A8 to address elevated concentrations of zinc detected in water samples collected from the storm drain in this area
- Installation of a new ground water monitoring well between petroleum source area wells in Building 134 and the storm drain reach from MH B5-1 to MH B6.
- Installation of a new ground water monitoring well near the shoreline adjacent to storm drain reach MH B8 to MH B9 to address the lateral extent of petroleum products in ground water in this area.
- Installation of a pair of ground water monitoring wells near the Basin Four storm drain to compare the concentration of petroleum products in ground water along the storm drain to the concentration of petroleum products in ground water approximately 10 to 20 feet laterally away from the storm drain. The purpose of this study would be to evaluate the potential for the backfill soils surrounding the storm drain to act as a preferential pathway for ground water flow.

Board staff supports these proposed activities. We understand from the schedule included in the Infiltration Study that the additional activities will be completed in coordination with forthcoming field work for the Remedial Action Monitoring Plan (RAMP) and Petroleum Corrective Action Plan. We concur with this schedule, and look forward to receiving the scope of work for review and comment in the near future.

### **Total Petroleum Hydrocarbons in Basin Four Storm Drain**

In review of the conclusions from the Infiltration Study, we do not concur that petroleum products detected in the water from the Basin Four storm drain are not related to contaminants in ground water in this area. Although the studies conducted did not indicate significant leakage of ground water into the storm drain in this area, Board staff believes it is unlikely that the detected petroleum hydrocarbons can be attributed to "storm water runoff" as discussed on page 11 of the Infiltration Study. Total petroleum hydrocarbons (TPH) were detected in the storm drain water at concentrations ranging from 520 to 1,700 ppb. These elevated concentrations of TPH do not appear to be indicative of storm water runoff from a site that no longer has significant industrial use. These concentrations also appear to be consistent with concentrations of TPH previously detected in the ground water in this area. Possible sources of TPH include ground water that is discharging into the storm drain but was not observed during the study, and/or sediments in the storm drain that are contaminated by TPH from previous industrial activities.

Board staff believes that additional assessment is necessary in the area of the Basin Four storm drain to determine the sources of the TPH. If the source(s) include ground water discharging into the storm drain, then the Navy may be required to take necessary actions to prevent the discharge of contaminated ground water into the storm drain. If the source(s) of TPH is storm water runoff as discussed in the Infiltration Study, then the Navy will need to evaluate the possible source(s) of this runoff and implement necessary remedial activities to abate these conditions. In this letter below, Board staff is requesting that the Navy further assess the source(s) of TPH in the Basin Four storm drain line and take necessary actions to either abate or justify these conditions.

### **Infiltration of Ground Water in Basin Two Storm Drain**

Data collected during the Infiltration Study indicate significant infiltration of ground water into the Basin Two storm drain. This section of the storm drain was isolated in attempt to collect a sample of water that would be representative of the ground water discharging into the storm drain. Analysis a water sample from this storm drain indicated that only zinc exceeded ambient water quality criteria (AWQC) for discharges into San Francisco Bay. The suspected source of zinc as reported in the Infiltration Study is the sediments observed in the storm drain rather than the ground water because zinc is not a ground water constituent of concern for this area. Although not discussed in the text of the Infiltration Study, data included in Table A-1 also indicate that TPH as diesel (380 µg/L) and motor oil (370 µg/L) were also detected in a water sample collected from the Basin Four storm drain.

Nickel was the primary constituent of concern for this section of the storm drain because it was previously detected in the ground water in this area at concentrations greater than AWQC for discharges to San Francisco Bay. Remediation has included the excavation and off-site disposal of approximately 28,000 cubic yards of soils containing elevated concentrations of nickel and other constituents of concern at IR-07. Recent ground water monitoring conducted in accordance with the RAMP indicates that the ground water does not currently contain nickel or other

constituents of concern identified in the ROD at concentrations exceeding AWQC. Based on these data, the Infiltration Study proposes that the remedial activities are not necessary to prevent the discharge of ground water into the storm drain in this area.

In regards to the TPH in the Basin Two storm drain, the Infiltration Study does not discuss the source(s) for the TPH, trigger levels for TPH, or the potential ecological impacts of TPH discharges to San Francisco Bay. The Navy has not formally proposed AWQC for TPH at Hunters Point Shipyard. It is inappropriate to discharge TPH contaminated ground water into San Francisco Bay without assessing ecological risk and the technical and economic feasibility of abating the discharge. In this letter below, Board staff is requesting that the Navy assess the ecological risk associated with TPH discharges in the Basin Two storm drain line and develop a recommendation for future actions to either abate the condition or provide appropriate justification for allowing the discharge. Remedial actions may be necessary to prevent the discharge of ground water into the Basin Two storm drain line to abate the discharge of TPH contaminated ground water to San Francisco Bay.

In regards to constituents of concern other than TPH such as nickel, ground water conditions are subject to change during future monitoring events conducted in accordance with the RAMP. If trigger concentrations contained in the Record of Decision (ROD) are exceeded in the future for nickel and/or other constituents of concern, Board staff believes that additional assessment of the Basin Two storm drain line should be required to investigate the chemical nature of discharges to San Francisco Bay. This assessment would be necessary because a significant quantity of ground water is being discharged to the Basin Two storm drain line. In this letter below, Board staff is requesting that the Navy provide a plan of action for further sampling of the Basin Two storm drain line if ground water samples from this area indicate that trigger levels are exceeded for one or more constituents of concern.

### **Necessary Future Actions**

Board staff requests that the Navy provide a time schedule to the Regional Board and other members of the Base Realignment and Closure Cleanup Team (BCT) no later than **July 1, 2000** for the following tasks:

- Assessment of the source(s) of TPH detected in water samples collected from the Basin Four storm drain line.
- Assessment of the ecological risks associated with the discharge of TPH contaminated ground water to the Basin Two and Four storm drain lines, and an evaluation of the technical and economic feasibility of abating the discharges of TPH contaminated ground water from the Basin Two and Four storm drain lines to San Francisco Bay.

- Development of a plan of action for sampling of the Basin Two storm drain line if ground water samples from this area exceed trigger levels contained in the ROD for one or more constituents of concern.

If you have any questions regarding this matter, please feel free to contact me at (510) 622-2377 or by electronic mail at [cm@rb2.swrcb.ca.gov](mailto:cm@rb2.swrcb.ca.gov).

Sincerely,



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